OL. 78 NO. 3

textile bulletin

MARCH • 1952

Part One of a series by W. M. McLaurine, 'The Southern Textile Heritage' 30

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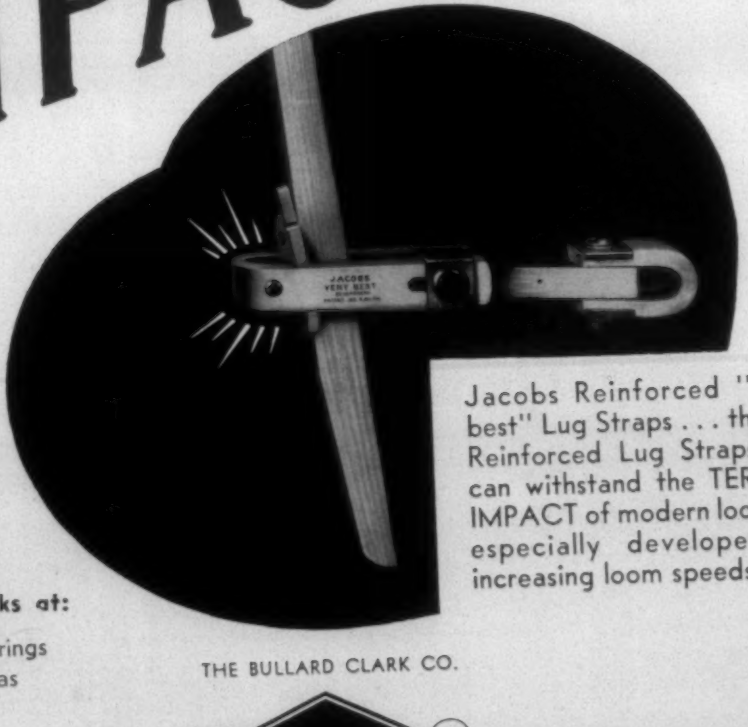

IMPACT

Jacobs Reinforced "Very-best" Lug Straps . . . the only Reinforced Lug Straps . . . can withstand the TERRIFIC IMPACT of modern looms . . . especially developed for increasing loom speeds.

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THE BULLARD CLARK CO.

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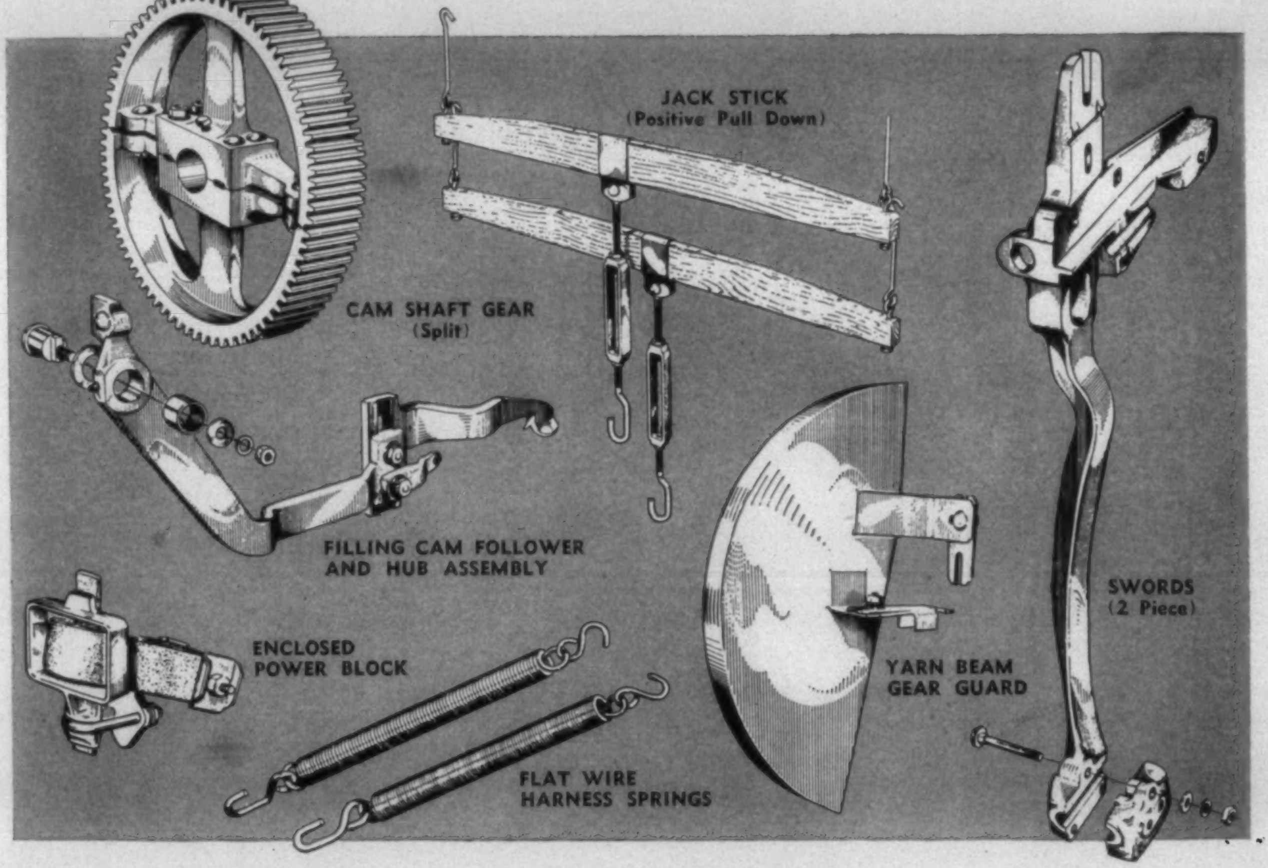


When you buy repair parts for your car, you buy the parts from the manufacturer of the car.

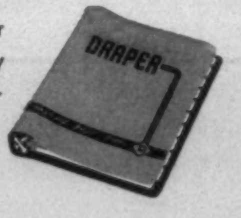
When you buy repair parts for your looms, do you buy them from the manufacturer of the looms?

Draper repair parts are designed by the same engineers who designed your looms.

Draper repair parts are dependable because they have the Draper "know-how" standing behind them. Who better knows where the stresses and strains will occur than the designer of the original loom?

Draper repair parts are uniform because they are machined on the same jigs and fixtures. Therefore they fit.

Why take a chance? Treat your looms as you do your car and buy the best repair parts available — Draper Improved Repair Parts.

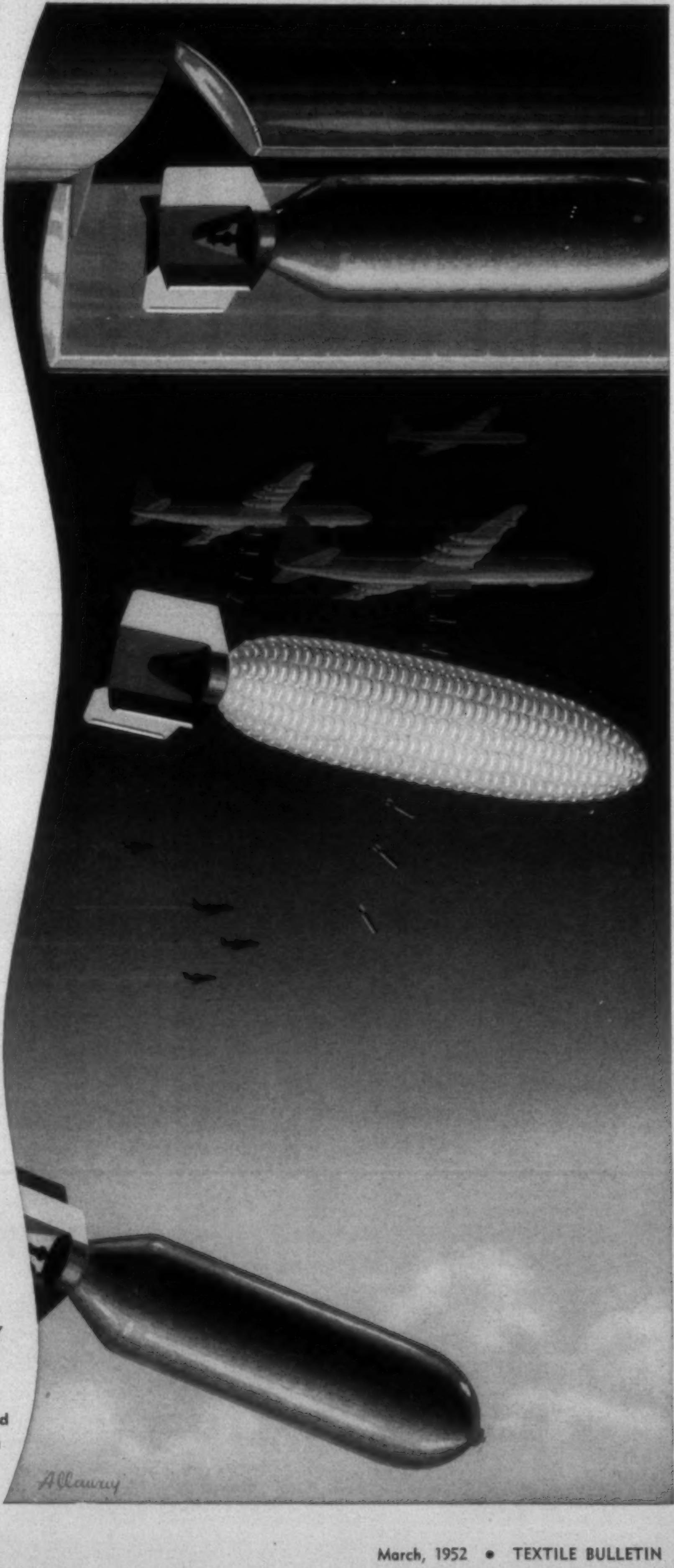


DRAPER CORPORATION

"Retaining Leadership through Research"

ATLANTA, GA. **HOPEDALE, MASS.** **SPARTANBURG, S. C.**

What's corn doing 35,000 feet up?



The casing of the bomb . . . possibly the high explosives inside . . . both require the use of special corn products in the manufacturing process. These, and hundreds of other corn products, have been developed by the continuing basic research in corn that serves all American industry . . . serves you.

Corn products in textiles

In the textile field starches, gums and dextrines provide superior formula ingredients for many textile processes. New techniques involving the use of corn products are being developed as part of a continuing research program at Corn Products Refining Company.

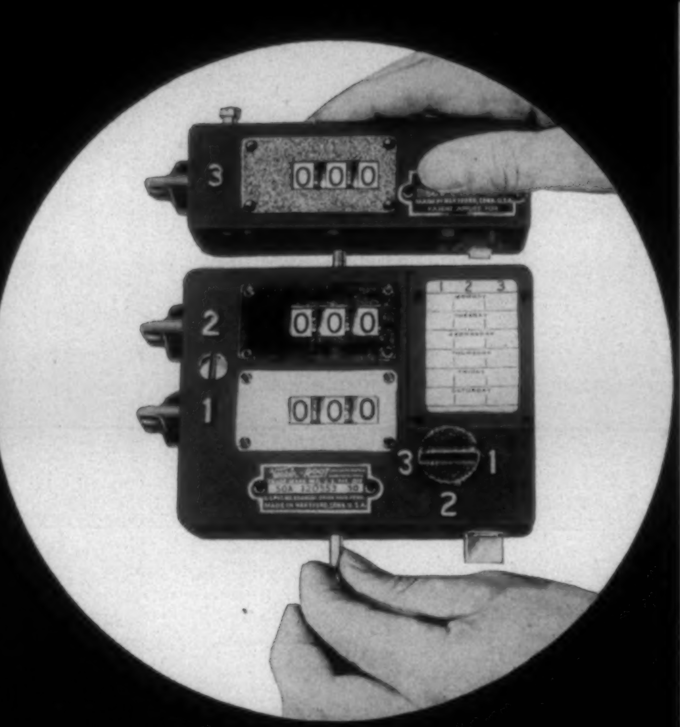
If you have a production problem why not check with Corn Products. A complete line of corn products for every purpose is available. Technical service is yours . . . no obligation, of course.

CORN PRODUCTS REFINING COMPANY
17 Battery Place, New York 4, N. Y.
Manufacturers of

GLOBE brand dextrines, gums	**GLOBE brand starch**	**EAGLE brand corn starch**

Now

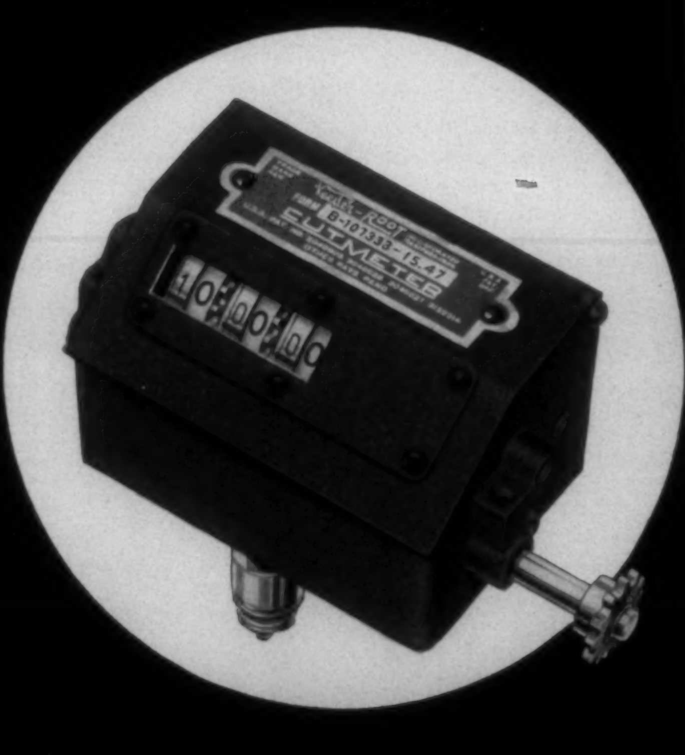
is the time to get LOOMS equipped for DRASTIC PRODUCTION DEMANDS ...with up-to-date



2-3 CONVERTIBLE PICK COUNTERS

VEEDER-ROOT COUNTERS

LOOM CUT METERS



*COUNT*ROL is more vital now than ever before. How to keep costs down? How to keep production rolling at top levels? How to utilize workers' efforts with utmost efficiency . . . and pay for them most fairly?

Questions like these can be answered with the help of accurate, up-to-the-minute figures provided by Veeder-Root Counters like the 2-3 Pick Counters and Cut Meters shown . . . quick and easy to read and reset. Let an experienced V-R engineer look over your operations from opening room to weave room . . . and see what savings he can add for you with Veeder-Root *Count*rol.

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GREENVILLE, S. C.

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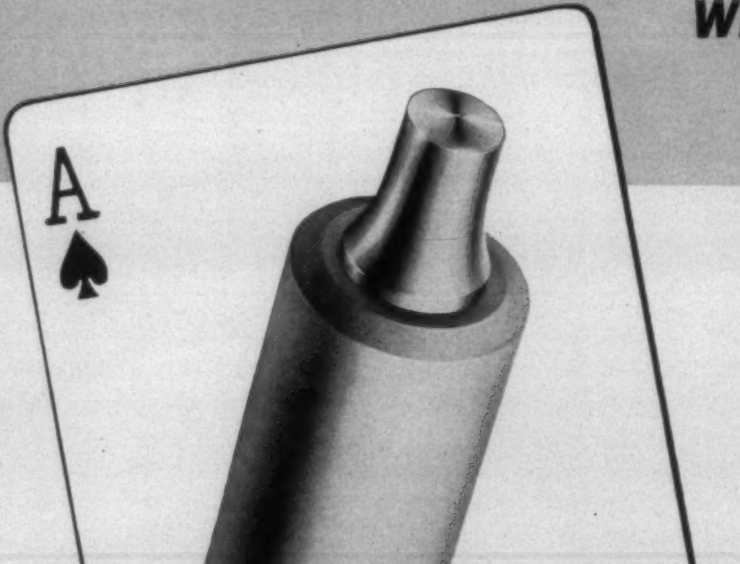
How to win in a draw!

THE NEW IMPROVED DAYCO COT

with fiber repellence plus!



- ★ **SAVES LABOR COSTS**
- ★ **STOPS TIME-OUTS FOR ENDS-DOWN AND LAP-UPS**

This new "spinner" even tops the sensational service that other types of Dayco Cots have given! And, if you're now using ordinary cots, this new and improved Dayco will increase the cot life you're now getting by *years!*

It's made of an entirely new compound of American Rubber, scientifically blended for fiber non-attraction. Its non-stop performance cuts non-productive costs—the cost of time and labor required to cope with ends-down, lap-ups. It's versatile, too—use it for spinning all types of fibers: cotton, wool, blends or synthetics.

THE DAYCO LONG DRAFT APRON...

The precision apron

- ★ SAVES STARTING TIME
- ★ SPEEDS PRODUCTION
- ★ CUTS MAINTENANCE COSTS

No false starts after a shut-down, when your frames carry Dayco Long Draft Aprons! Just turn on the power and spin, right from mill-opening on Monday. No warm-up period before you can begin production. "First apron I ever saw that you wouldn't lose a few with, when starting up!" says a South Carolina overseer.

Because it's precision made, you can change apron length by as little as 1/64" in diameter. Dayton's own exclusive method of marking for the two-apron system guarantees you a perfect fit, for any age or type of cradle. Thickness, diameter, and width never vary.

To learn more about these two fine tools for better drafting, as well as the other Dayco and Thorobred products, see your salesman; or write: *Dayton Rubber Co., Textile Division, Woodside Bldg., Greenville, S. C.*

Girls like this six-shooter are cuter, ***because Dayton's in on the draw, helping spin and weave winning costumes that make pretty cowpokes prettier.***

Dayton Rubber

"Masquerading Fabrics"
Can Lead You a Fast Dance!

In a recent issue, QUICK magazine predicted for 1952 a sharp uptrend in fashion-acceptance for what it calls *"Masquerading Fabrics,"* such as "silk-like wools, wool-like silks, satin-like cottons, fur-like tweeds."

And behind the scenes, this helter-skelter fashion show demands looms that are literally "quick-change artists" . . . looms that are adaptable practically overnight to sudden changes in fibres, constructions and widths . . . modern, high-speed, CONVERTIBLE C&K CALL-BOX LOOMS.

Is *your* mill modernized and fortified to protect its profit-position, come what may? If not, *see C&K today.*

C&K
A Loom for every Woven Fabric

THIS "INVISIBLE TRADEMARK" STANDS BACK OF THE TRADEMARKS OF THE WORLD'S FINEST WOVEN FABRICS

Crompton & Knowles LOOM WORKS

WORCESTER 1, MASSACHUSETTS, U. S. A.

Philadelphia, Pa. • Charlotte, N. C. • Allentown, Pa. • Crompton & Knowles Jacquard & Supply Co., Pawtucket, R.I.

Direct Dyed

but triple fast

Not just fast to laundering and perspiration—fast to light, too!

Yes, CUPROFIX colors and after-treatment give cotton and rayon fabrics such a high degree of fastness *to all three* . . . that direct dyeing now compares favorably with more expensive vat dyeing!

But *only* with CUPROFIX can you expect direct-dyed fabrics to have satisfactory fastness to *sunlight.* Only CUPROFIX gives you triple fastness in direct dyeing.

Economy—and Quality, too!

You save many dollars when you use direct dyes. For pennies more—relatively—you can make the big saving *without* sacrificing quality . . . and compete successfully with many vat-dyed fabrics.

Get acquainted with CUPROFIX now—write us for Booklet U. S. 125. SANDOZ CHEMICAL WORKS, INC., 61 Van Dam St., New York 13, N.Y.

Label Resin-Treated Garments "WASHABLE"

Adding CUPROFIX to the resin bath increases fastness to washing sufficiently to permit labeling garments "washable" instead of just "dry cleanable". It also:

materially increases efficiency of the usual resin treatment

eliminates in many cases the effect of resin on light fastness.

SANDOZ CHEMICAL WORKS, Inc.
61 Van Dam Street, New York 13,
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stocks at Boston, Philadelphia,
Charlotte, Los Angeles, Toronto.
Other branches at Providence,
Paterson, Chicago.

SANDOZ *thinks ahead with textiles*

SANDOZ

Fast to Light · Wash · Perspiration
Pressing · Cleaning

CUPROFIX

BY SANDOZ

You can draw a winning poker hand sometimes, but you can always draw lucky numbers if you buy Ashworth Card Clothing. The lucky numbers are 4-6-7 and they stand for:—

4 FACTORIES (Fall River, Worcester, Philadelphia, Greenville) which assure you of an uninterrupted supply of card clothing. Decentralized and strategically located, these factories can "pinch hit" for each other in emergencies.

6 REPAIR SHOPS (Fall River, Philadelphia, Charlotte, Greenville, Atlanta, Dallas [Textile Supply Co.]), which assure convenient, economical and prompt reclothing and repair service.

7 DISTRIBUTING POINTS (Fall River, Worcester, Philadelphia, Charlotte, Greenville, Atlanta, Dallas [Textile Supply Co.]), which make Ashworth products and consultation service more readily available.

AND DON'T FORGET "90". More than 90 years of experience in cards and card clothing — your guide to a consistently high standard of quality in manufacture and efficiency in performance.

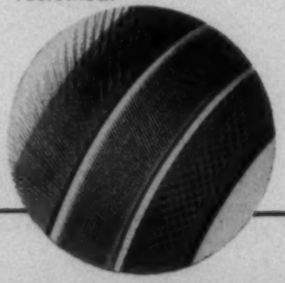
Buy Ashworth Card Clothing and be lucky ALWAYS.

PRODUCTS AND SERVICES

. . . Card Clothing for cotton, wool, worsted, silk, rayon and asbestos cards and for all types of napping machinery. Brusher clothing and card clothing for special purposes. Lickerin wire and garnet wire. Sole distributors for Platt's metallic wire. Lickerins and top flats reclothed.

ASHWORTH BROS., INC.
AMERICAN CARD CLOTHING CO. (Woolen Division)
Fall River • Worcester • Philadelphia • Charlotte • Greenville
Atlanta • Dallas (Textile Supply Co.)

Ashworth CARD CLOTHING



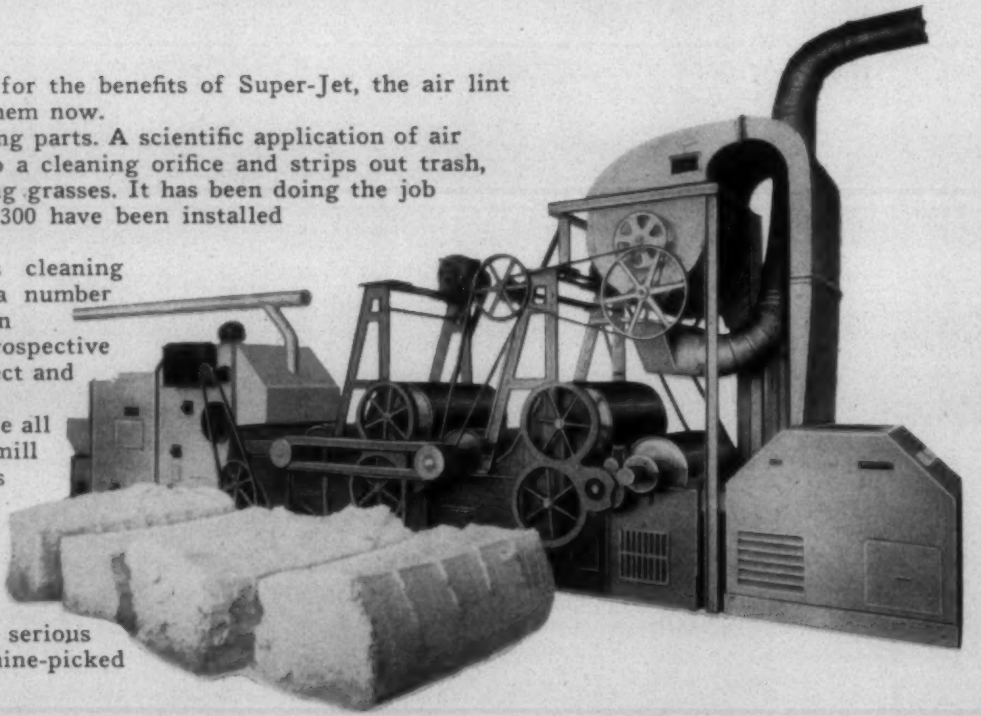
FULLY PROVEN AND READY....

NOW

You don't have to wait for the benefits of Super-Jet, the air lint cleaner. You can have them now.

Super-Jet has no moving parts. A scientific application of air streams floats the lint to a cleaning orifice and strips out trash, neps, motes . . . even long grasses. It has been doing the job for three seasons, and 1300 have been installed in cotton gins.

The Aldrich-Lummus cleaning system is at work in a number of mills which have given us permission to bring prospective purchasers to visit, inspect and ask questions about its operation. These mills are all enthusiastic, as is every mill where the equipment has been installed. We feel sure that when you see the results they are getting you will want this solution to a problem that has become serious since the advent of machine-picked cotton.



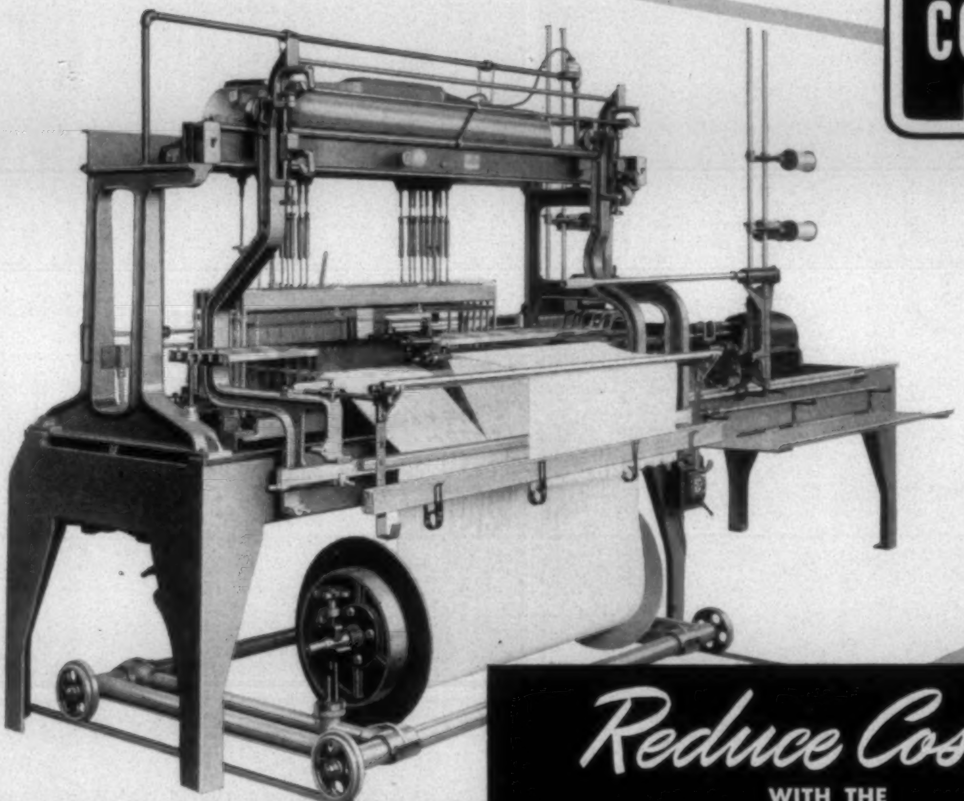
Made by

LUMMUS COTTON GIN CO.
Columbus, Ga.
and
ALDRICH MACHINE WORKS
Greenwood, S. C.

Sold and Installed by

AldricH MachinE
Greenwood **WorkS** South Carolina

ALDRICH - LUMMUS CLEANING SYSTEM



BARBER COLMAN

Reduce Costs!
WITH THE
BARBER-COLMAN DRAWING-IN MACHINE

★ VERSATILE...
★ ACCURATE...
★ EFFICIENT...

DRAWS IN HEDDLES, DROP WIRES, AND REED IN ONE OPERATION

Many mills today are running such a variety of weaves, patterns, and stripes that the drawing-in operation becomes a major cost item. *Substantial savings* can be made by the use of a Barber-Colman Drawing-In Machine. This machine will handle any plain, fancy, or dobby weave. It draws-in all the heddles, drop wires, and reed in *one* operation — automatically selecting the proper heddle, drop wire, and reed dent for each thread. Any form of skip draw can be handled as easily as straight sequence, and the draw can be made from either a flat sheet or leased warp. The machine is available in a variety of capacities, drawing as many harness and banks of drop wires as required. Variations in size will take care of all standard loom widths. Modern mills of any size can take advantage of the versatility, accuracy, and efficiency of this outstanding machine to effect important savings in what has been a slow and costly hand operation. Consult your Barber-Colman representative for a discussion of possibilities in your own mill.

AUTOMATIC SPOOLERS • SUPER-SPEED WARPERS • WARP TYING MACHINES • DRAWING-IN MACHINES

BARBER-COLMAN COMPANY
ROCKFORD • ILLINOIS • U. S. A.
FRAMINGHAM, MASS., U. S. A. GREENVILLE, S. C., U. S. A. MANCHESTER, ENGLAND MUNICH, GERMANY

New Sizing Gives High Efficiency on Difficult Weaves

DEVELOPED ESPECIALLY FOR SPUN RAYON WARPS AND VARIOUS COMBINATIONS OF STAPLE VISCOSE RAYON WITH OTHER STAPLE FIBERS

Sta-Gel is a new kind of sizing developed by Staley at the request of rayon mills especially for sizing viscose spun rayon warps. It works equally well on various combinations of spun viscose rayon with acetate rayon, wool, cotton and other staple fibers.

Rayon mills now using *Sta-Gel* report it gives far better sizing results on *difficult* rayon weaves.

SMOOTHER, TOUGHER SIZE—Each fiber is protected with a smoother, more rugged size. Fewer "fuzz balls." Makes difficult constructions easier to weave than ever.

MORE STRENGTH & BINDING POWER—*Sta-Gel* binds the wild fibers to the body of the yarn adding extra strength and weavability.

REDUCES SHEDDING—*Sta-Gel* reduces shedding appreciably in mill operation.

IMPROVED LOOM EFFICIENCY—Gives you outstanding loom efficiency on your most complicated spun rayon weaves—lower percentage of seconds.

EASIER DESIZING—*Sta-Gel* desizes perfectly by any conventional desizing method.

COSTS LESS—because *Sta-Gel* goes farther, you can cut your size consumption noticeably, and get lower cost sizing for all types of weaves.

THERE IS A SUPERIOR QUALITY
STALEY STARCH FOR EVERY TEXTILE NEED

If you are not already using Sta-Gel, get the facts about this new type, high efficiency spun rayon warp size. Send the coupon now!

STA·GEL

MADE BY STALEY'S
High Efficiency Spun Rayon Size
A. E. STALEY MFG. CO. • Decatur, Ill., U.S.A.

Dependable Service from

Atlanta, Ga.
Boston, Mass.
Chicago, Ill.
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Spartanburg, S. C.

STALEY
Staley
PRODUCTS
Research Pioneers in Products from
CORN and SOY BEANS
®

A. E. Staley Mfg. Co.
Dept. TB-3
Decatur, Illinois

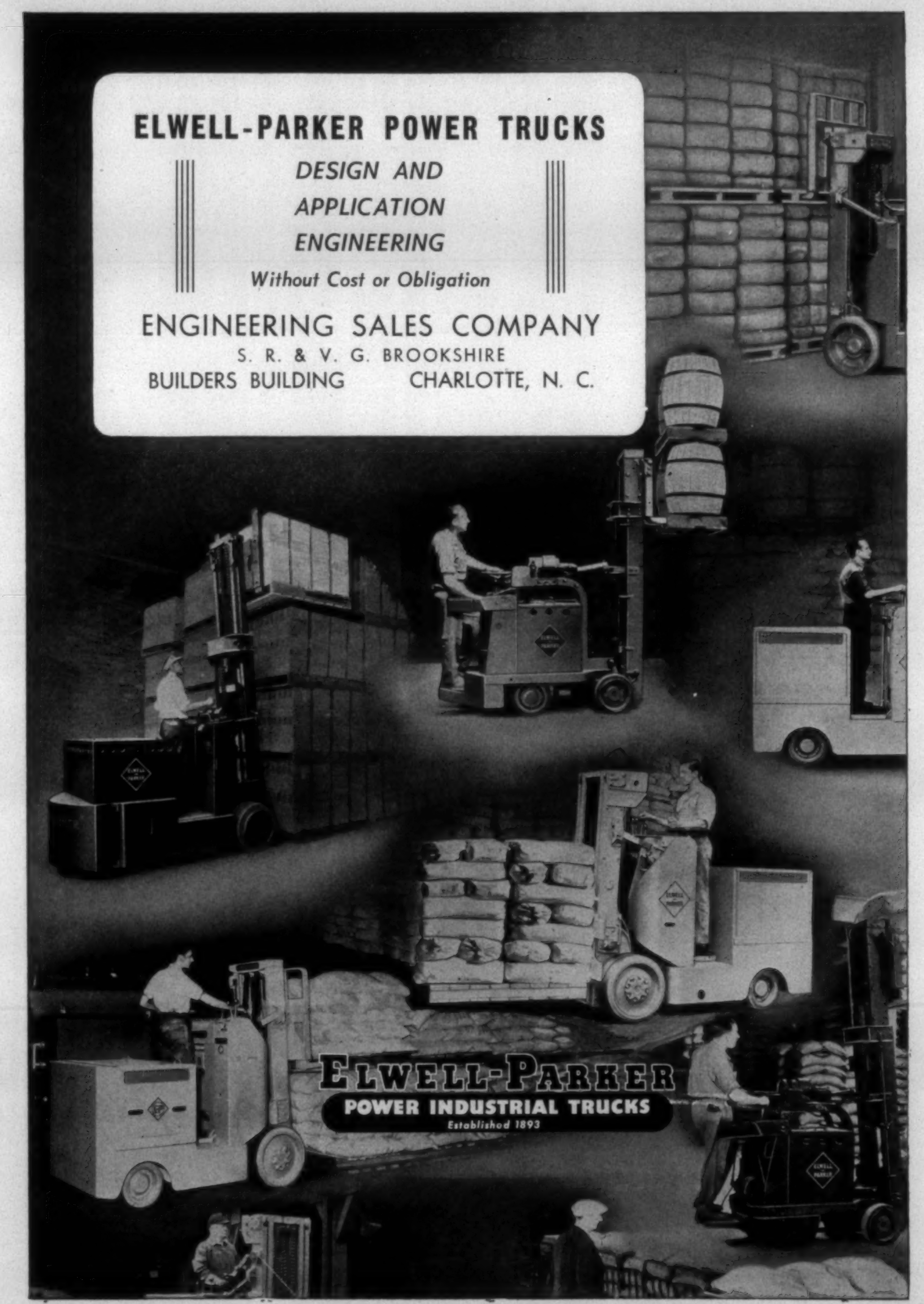
Gentlemen:
I'm interested in Sta-Gel . . . please rush me full details about this new, better kind of rayon sizing.

Name____________________

Company____________________

Address____________________

City__________ Zone____ State______



ELWELL-PARKER POWER TRUCKS

DESIGN AND
APPLICATION
ENGINEERING
Without Cost or Obligation

ENGINEERING SALES COMPANY
S. R. & V. G. BROOKSHIRE
BUILDERS BUILDING CHARLOTTE, N. C.

Gown by Martini

Brilliant color stimulates sales

For distinctive color effects in your new fabrics, new weaves or new prints, let National Technical Service provide exact matches and economical formulas. And for your everyday needs, phone National Aniline for prompt delivery from nearby warehouse stocks of

National Aniline Dyes

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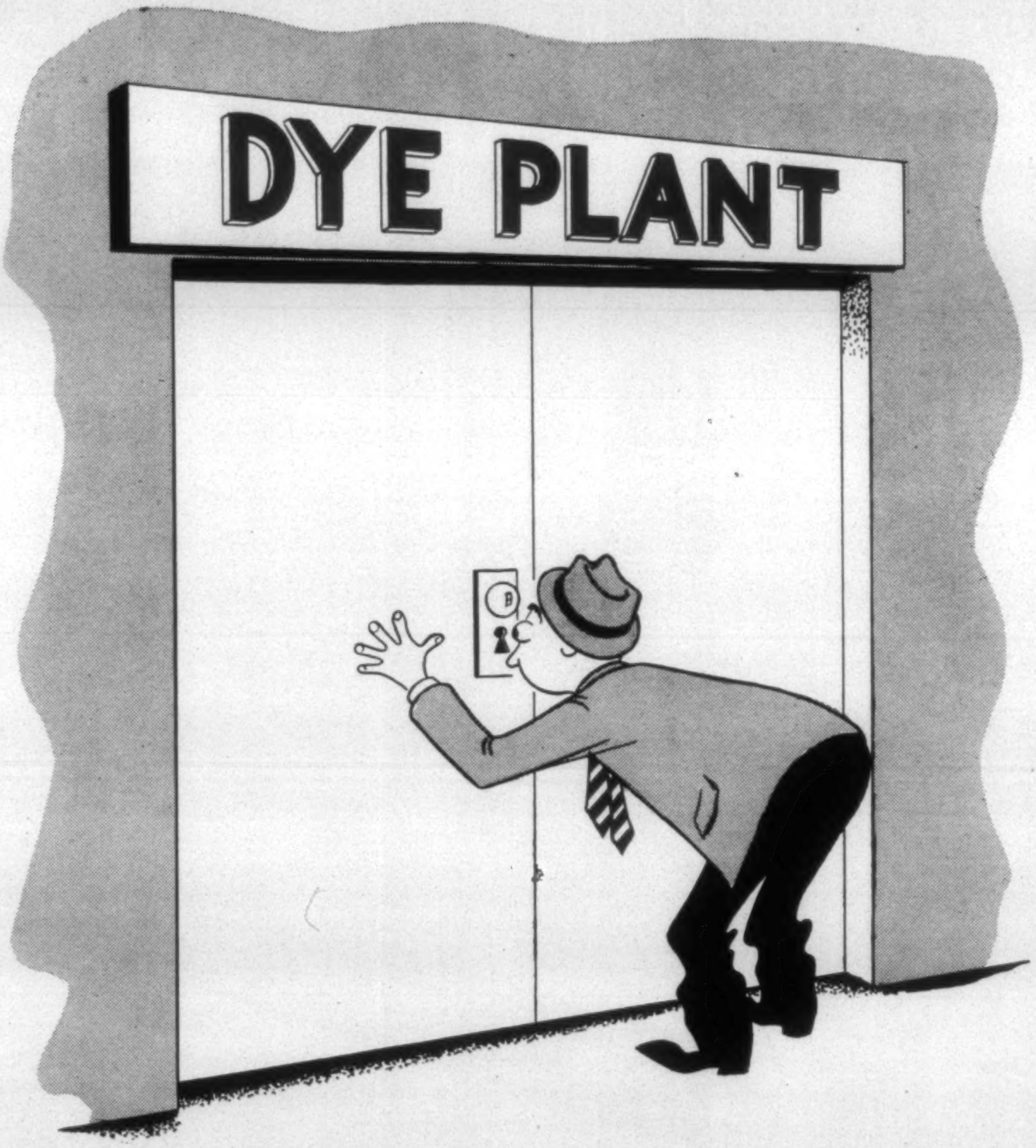


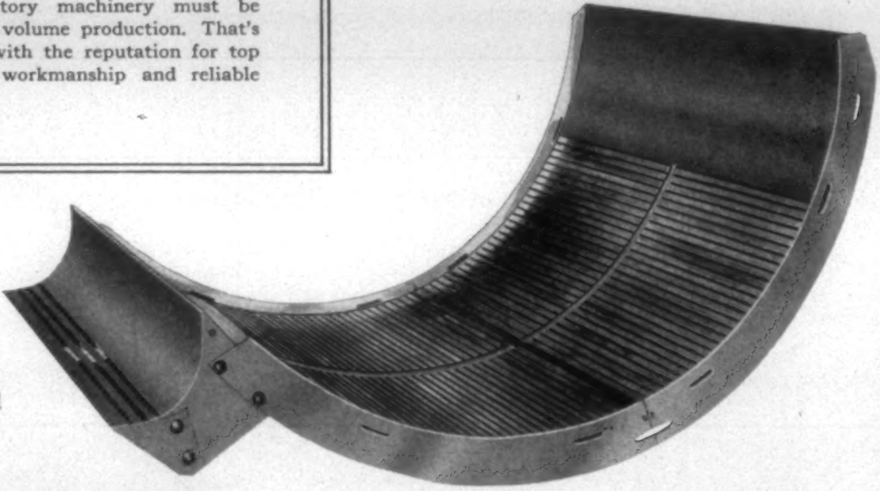
I'm no Peeping Tom . . . I'm just trying to get a glimpse of this new dye, bleach and boil-off machine for tricot, marquisette, lace and all open weave fabrics. Boy, is it sensational!

For Details Contact

Burlington ENGINEERING COMPANY, INC.
[illegible] GRAHAM, N. C.

MORE PRODUCTION AT LOWER COSTS with GASTONIA TEXTILE SHEET METAL PARTS

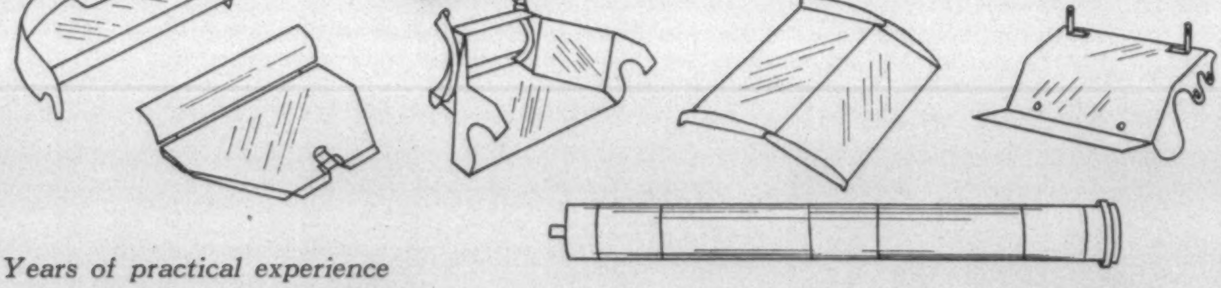
The quality and the profit of your end product starts at the beginning—where preparatory machinery must be geared for efficient, economical volume production. That's our job—a job for specialists with the reputation for top quality products, painstaking workmanship and reliable service.



Standard type rib or perforated Card Screens are precision built on special jigs. Every screen is inspected and double checked for accuracy and tolerance.

Picker, Condenser and Waste Machine Screens of maximum strength and durability are constructed of the best materials available.

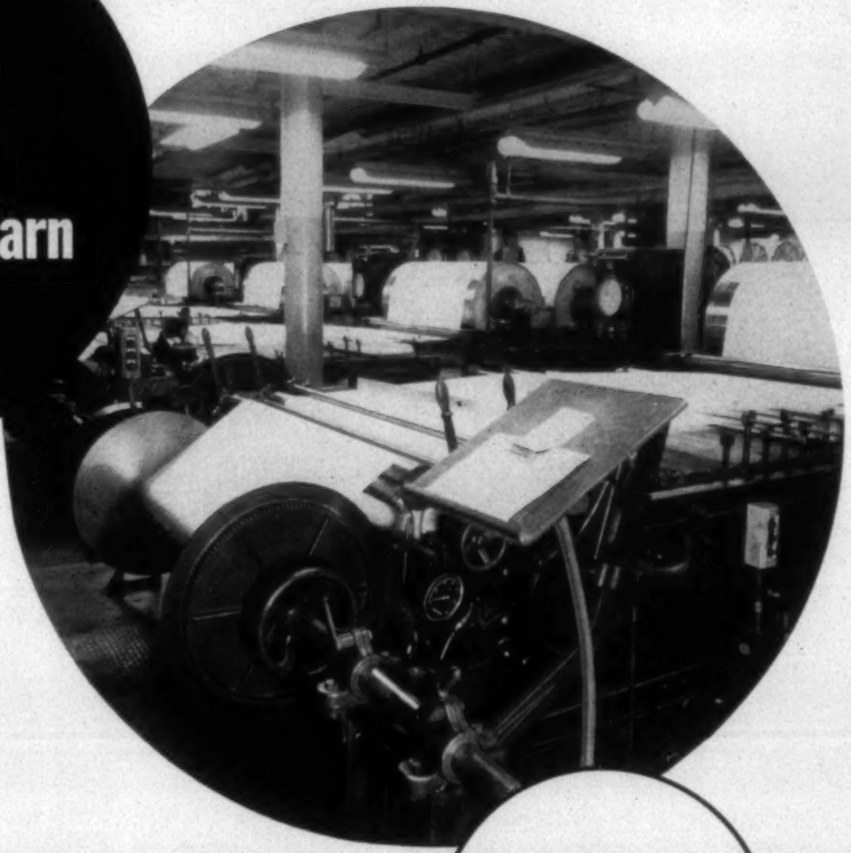
New and rebuilt Cylinders are dynamically balanced to reduce vibration to an absolute minimum.



Years of practical experience —the finest of raw materials —and precision machinery in the hands of skilled workmen go into every product.

GASTONIA TEXTILE SHEET METAL WORKS, Inc.
GASTONIA, NORTH CAROLINA
A SHEET METAL WORKS SERVING TEXTILE MILLS

Maximum Production on Any Type Yarn



Battery of Cocker Slashers in a Southern Mill

This battery of Cocker slashers is used to run cotton, filament, and spun yarns and is giving the same efficiency and maximum production on all three yarns. These machines are complete with the latest Cocker improvements, permitting operation at high speeds with minimum down-time. Some of these features are:

Finger-tip control of tension on yarn.

Patented Automatic Friction Control, permitting operation at high speed without heating or friction.

Graduated drive, permitting going from high speed to crawl speed without overrun of beams, and from crawl speed to high speed without strain or jerk on the yarn.

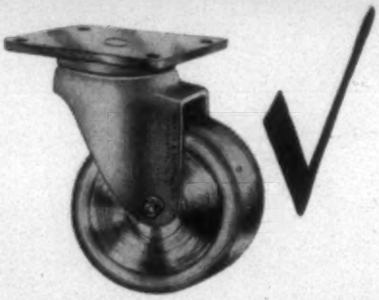
Instant speed changes to 90 yards per minute.

THE LEADER AROUND THE WORLD

COCKER Machine and Foundry Co., Gastonia, N. C.

WORLD'S LARGEST DESIGNERS AND BUILDERS OF COMPLETE WARP PREPARATORY EQUIPMENT

The *Freest* *Spinning* Caster on the Market



Compare WIL-MAT Casters' spinning qualities with those of any other caster on the market. Twin heavy steel ball bearings, in thrust type hardened natural raceways, and accurately machined parts will keep WIL-MATs spinning freely long after other casters have stopped. This means that WIL-MAT equipped trucks, etc., roll with far less resistance—far less wear on your floors—and far less effort by personnel.

Add to this WIL-MATs 30% to 40% heavier tread (and longer life), its curved chip-proof bevel which cannot wear to sharp edges, and its sheet-steel tire which will not pick up grease, oil, or grime to track up your floors, and you have some of the reasons why WIL-MAT Casters have been adopted as standard equipment on the finest textile trucks and are used, exclusively, by many of the most progressive mills.

. . . and They Won't Clog Up

WIL-MAT CASTERS

Ball Bearing
RIGID & SWIVEL

Wilkin & Matthews
Charlotte, N. C.

WHAT OTHERS ARE SAYING

Thoughts While Shaving

THE other morning, as per daily custom, I got out my trusty electric razor (the name of the maker purposely omitted here—no free plug), turned on the switch and proceeded to shave. As usual I could not help noticing that some of the whiskers were longer than others. This has always puzzled me.

"Why in the same length of time does one whisker grow longer and stronger than others of its fellow whiskers?", I have often asked myself.

Growing in the same soil, or rather I should say same skin, blood and flesh alongside of a puny runt, a healthy, virile whisker blossoms forth. Just why I have never been able to figure out. But when my razor has gotten in its licks, all of the whiskers, both healthy and puny, are reduced to the same size—that is, no size at all.

It must be plumb discouraging to a healthy whisker that has toiled night and day to gain stature, to be mowed down to the size of the shiftless, non-toiling bit of fuzz.

On this particular morning it suddenly dawned on me that what that razor was doing to the individual whisker on my face is exactly what Socialism does to the individuals of a nation. It cuts them all down to one size, that is, no size at all.

Under a socialistic economy the hard-working, thrifty, self-reliant individual is reduced to the same size as the shiftless, wasteful, unreliant citizen. Struggle as he may, constantly he is cut down.

Finally, he loses all incentive to attempt to lift himself above his fellows and, discouraged, he throws up his arms in surrender and ceases to struggle.

The theory of Socialism is beautiful—the idea of all sharing alike is intriguing; especially for those who have little or nothing to share. But Socialism in practice, that is something else again. The end result is that all do share alike—each finishes up with a large equal slice of nothing.

For when you reduce the honeybees to the status of the drones, no honey is produced.

But there is something Socialism creates that is worse than poverty, uncomfortable as that status is, and that thing is loss of freedom. Loss of freedom goes hand in hand with Socialism. Those in charge of the dividing process have a nasty habit of dictating how each recipient of the division shall spend his share.

The citizen of the socialistic state is told where and at what he shall work, how he shall live, how he shall educate his children, what doctor and dentist shall serve him; he is even told how to entertain himself. If you doubt the foregoing statement, just ask any Englishman.

The English have learned the hard way, that under a socialistic government they not only were ruled and regulated to the hilt, but were gradually coming to share less and less. Let's hope that they did not awaken too late and that the Churchill government will be able to restore their lost freedoms and lift their standard of living from the low level to which it has sunk.

Of course, those who foisted Socialism upon England were honest about it. They called it "Socialism." Those who are trying to force Socialism upon America are not so forthright. They have a lot of fancy, misleading names for it, such as, "social security," "compulsory medicine," "public housing," etc. They know that were they to call it by its right name, the American people would avoid it like a plague.

The editor of the *Dayton* (Ohio) *Press.*, in an editorial pointing out how lucky we Americans are, made this very true and wise observation: "The farther you move from freedom the more you pay for a life that is worth less to live."

That would seem to be a high note on which to end this piece, bearing the unusual title, "Thoughts While Shaving."—*George Peck,* chairman of the board of the National Labor-Management Foundation and executive editor of its official publication, *Partners*.

Textile Contract Policy

THE policy of granting government contracts to plants in areas suffering from unemployment, without regard to low bids, appears to be blocked in Congress, at least temporarily.

And it should stay blocked. The

The COLOR that's bought by this up-to-date wife...
Should be COLOR that lasts for the fabric's whole life!

DU PONT VAT DYES give today's shoppers the kind of color performance they expect—all-round fastness to laundering, sun, perspiration and dry cleaning.

Always dye with an eye to the end use.

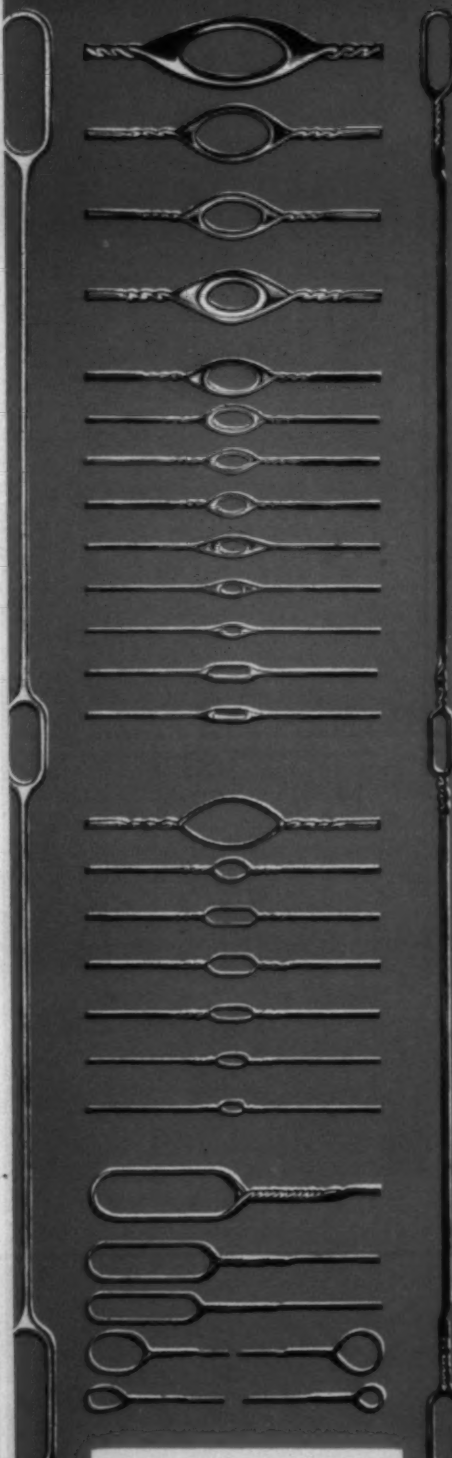
Du Pont Dyestuffs

DU PONT
REG. U. S. PAT OFF
BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY

Drapery and slipcover materials are just one application for Du Pont PONSOL* and LEUCOSOL* (anthraquinone-type dyes). Our technical staff will work with you in your choice and application of these uniform, deep-penetrating vat colors. E. I. du Pont de Nemours & Co. (Inc.), Dyestuffs Division, Wilmington 98, Delaware.

*REG. U. S. PAT. OFF.

Stehedco and Southern



Although famous for Stehedco flat steel heddles—twin wire and brazed eye heddles can also be supplied. A few of the most popular styles are illustrated above.

STEHEDCO and SOUTHERN
"Weave the World's Needs"

Herald takes this position, not because of the policy's discrimination against the Southern textile industry, but because this practice would bore into the foundation of the most vital factor in America's economic system—competition. There are those who will argue that the policy is not only an exception necessitated by widespread unemployment. But it would be setting a precedent, and precedents can be dangerous.

The centers of unemployment most referred to are in New England. It became apparent some time ago that New England textile plants, under present conditions, cannot compete with Southern firms on pricing. But the trouble lies within the New England textile industry, and getting rid of the trouble is not the Federal Government's responsibility.

Several factors are involved in the New England textile industry's inability to meet Southern prices, but the one most often mentioned by management leaders in that industry is one for which there is little excuse, it appears to us. That is productivity of the individual worker.

And this, incidentally, is a compliment to the Southern textile worker. New England workers simply don't do as much work as their Southern counterparts. Tied in with this is the wage differential; but industry leaders, including those in New England, maintain that this is not a major factor. The fact that New England workers receive more pay for less work smacks of a practice which, in the long run, can only harm labor as a group, and this is featherbedding.

We do not deny that the government should render aid to an area hit hard by unemployment, but we do oppose the method of aid proposed in the case of New England textiles. If they need aid, let's aid them, but not in a manner which poses a danger—to the balance of American business competition, even if the danger is remote.

The *Herald* hopes this danger is recognized by enough congressmen to prevent this contract policy from being implemented.—*Spartanburg* (S. C.) *Herald*.

Machinery Replacement

BILLIONS of yards of goods are produced by American mills each year. It is this mass production that makes fine fabrics available to everybody at reasonable cost. But this same mass production takes its toll in machinery wear.

Each year our industry spends huge sums of money to maintain and repair its machinery, but in spite of these heavy expenditures the machines are of less value at the end of each year than they were at the beginning. A machine wears out with use so the cost of the machine must be spread over the total yardage it will produce during its life. The value which is taken from the industry's machinery through a year's use must be charged against the goods produced in determining production costs.

This charge — or depreciation — is figured on the actual cost and the estimated life of the machinery. Machines cannot be charged off on the basis of replacement cost.

For example, if a carding machine that cost $1,000 in 1930 becomes worn out in 20 years and the full $1,000 has been charged off to depreciation, it would actually cost about $3,400 to replace it in 1951. Thus the depreciation charge would fail to cover the replacement cost of this single machine by around $2,400 . . . and the industry must replace millions of dollars worth of machinery each year in order to maintain the productivity, efficiency and vitality that is so characteristic of this highly competitive industry.

Extra costs over and above depreciation charges for machinery replacement must come from current earnings or from reserves set aside from previous earnings. Earnings are necessary to provide the "tools" that mean more jobs, more production and more security for all. — *Hanes Knitter*, P. H. Hanes Knitting Co., Winston-Salem, N. C.

Controls And Depressions

A GREAT deal of howl has been put up against certain phases of price control, but one in which the South is particularly interested seems to have particularly sound cause. That is the textile industry. The situation is highlighted not only by the official protests of its exponents but by the personal opinion of a large number of citizens who have more or less knowledge of the situation.

The cotton textile industry has made formal protest to Mobilization Director Charles E. Wilson through the

*This pigeon selected Stehedco Heddles for its most important job: Weaving a secure nest for its young ones.
(Actual Photograph)

...to select Stehedco Heddles when your weaving job is important to you

Steel Heddle Mfg. Co., the largest manufacturers of Loom Harness Equipment possesses every known facility and resource and is prepared to furnish every type of heddle required for your weaving needs. There is a specific Stehedco Heddle for every kind of fibre material or synthetic: Silk, Rayon, Nylon, Orlon, Dacron, Cotton, Worsted, Wool, Straw, Cellophane, Paper, Wire, Fibreglass and Synthetics.

All are made with specially designed precision built equipment, operated by experienced craftsmen. These are the superior Stehedco features that assure you top quality weaving.

Consult our staff of Field Engineers maintained for the express purpose of assisting you with your mill problems.

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STEHEDCO and SOUTHERN "Weave the World's Needs"

American Cotton Manufacturers Institute, charging that the industry "is suffering from the killing blight of deflation." It charges that since the activation of price control it has "tobogganed by sharply declining prices, widespread unemployment, the severest drop in earnings of any major American industry, and, through loss of employees to other jobs, possible impairment of its capacity to meet future emergency defense needs."

The membership in this organization embraces 85 per cent of the industry, and it accompanied its protest with a statement of acutely depressed conditions.

Among these are the statements that in the last ten months unemployed textile workers reached 135,000; prices have been depressed more than 26 per cent below O.P.S. ceilings; according to the federal trade commission, of 22 major industries, textile products suffered by far the most severe drop in earnings; production was cut back from a raw cotton consumption of 9,000,000 bales in peacetime and 11,500,000 in the Spring of 1951, dropping 200,000,000 yards in the second quarter and another 373,000,000 yards in the third; the backlog of unfilled orders fell from nearly 50 per cent from 12 weeks to 6.8 weeks and stocks have risen from a little more than one week's production to five weeks' output.

The statement declares that controls have been referred to as a "necessary evil" but that when the necessity is removed they are only evil. The letter, written by Charles C. Hertwig, president of the institute, concludes that "the continuation or extension of price controls measures for this industry is completely unnecessary."

The cotton mills seem to have one of the best cases against controls.—*The State* Columbia, S. C.

NON-FLUID OIL
TRADE MARK REGISTERED

The All-Purpose Oil Can Lubricant

Even in this day of great technological advancements, a good deal of our textile machinery is still hand lubricated by oil can. NON-FLUID OIL, the drip-less, waste-less lubricant, has proved itself for 55 years as practically a one purpose lubricant for oil can application (excepting for spindle lubrication).

This versatility of NON-FLUID OIL is the reason that today it is being more widely used than ever in the Textile Industry despite the terrific sales campaigns currently being staged for ordinary oils. Years of actual experience have shown that NON-FLUID OIL provides cleaner and better lubrication at less cost.

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NON-FLUID OIL is not the name of a general class of lubricants, but is a specific product of our manufacture. So-called grease imitations of NON-FLUID OIL often prove dangerous and costly to use.

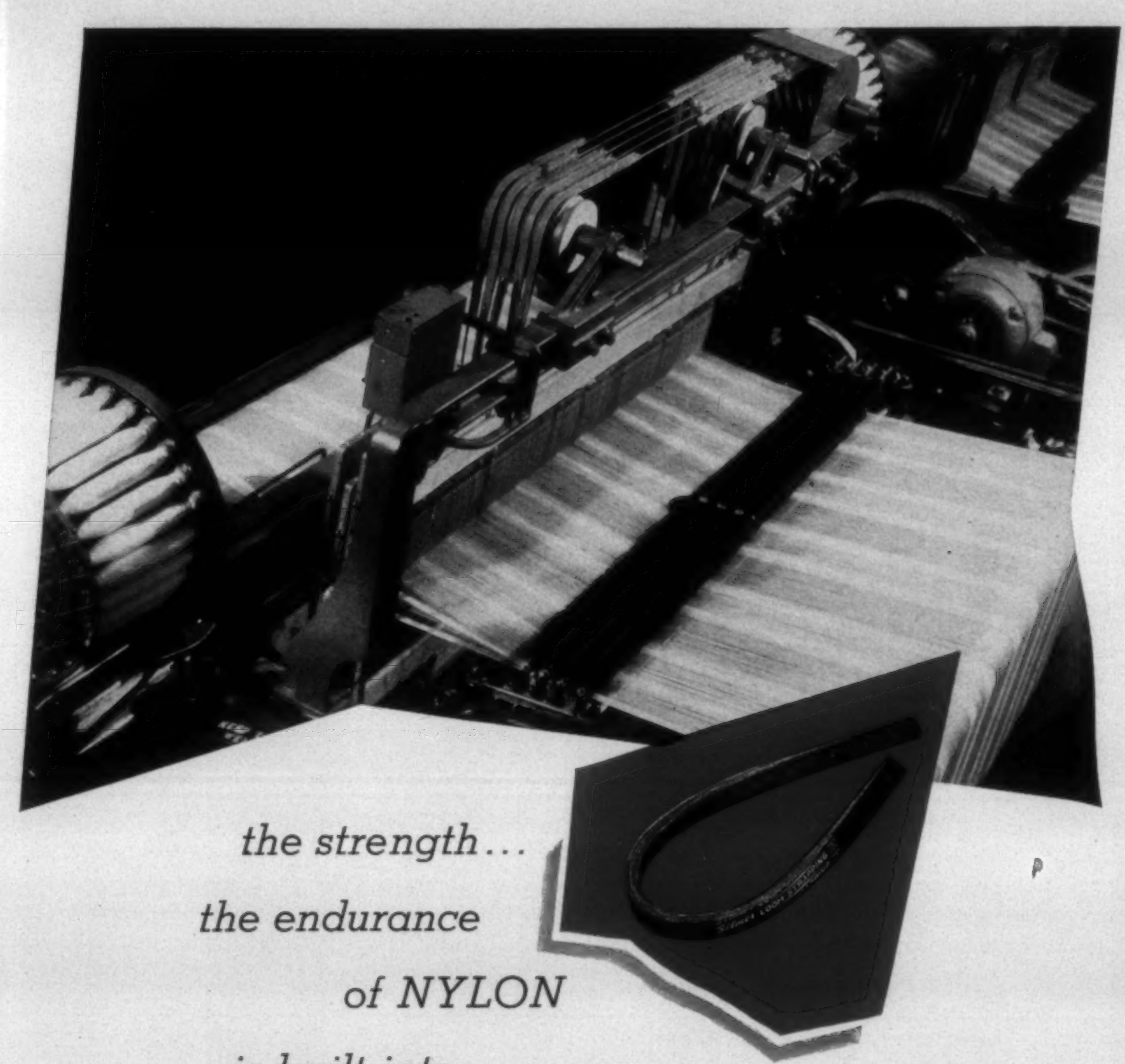
Progress And Fibers

FOR thousands of years, dependence was upon the natural fibers. People utilized them well and broadly, it is true, but always there was the limitation of what had been supplied by nature.

The man-made fiber industry has added rayon (viscose process and cuprammonium); cellulose acetate, nylon, Orlon acrylic fiber, Dacron polyester fiber, polyethylene, and such chemical complexities as polyvinyl-acetate, polyvinyl-acrylic, and polyvinyl-idene chloride. The industry also makes fibers from glass. Then there are the protein fibers known as the azlon group and coming from milk, peanut oil, the zein of corn, and the like.

What the man-made fibers have contributed in addition to specific and outstanding tailor-made properties is uniformity of product and price. Being free from the vagaries of nature, man-made fibers can be produced in large quantities at low, uniform cost. Thus they are free from wide and frequent price fluctuations such as occur from time to time in the markets for natural fibers. Since weather and other natural factors do not work for or against the man-made fiber producer, the quality of his product is naturally more uniform.

The effect of the development of man-made fibers has become apparent in every American home. Ease of care characteristics alone have endeared the newer fibers to the harried homemaker. Its social significance can be



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the endurance

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CONSTRUCTED of layer upon layer of 100% NYLON DUCK—rubber impregnated and formed into a material of incredible strength—Gilmer NYLON Loom Strapping is rapidly replacing other types of strapping in mill after mill. And no wonder! For mill operators have discovered that Gilmer NYLON Loom Strapping has—

- **LESS STRETCH**
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- **INCOMPARABLY LONGER LIFE**

Gilmer NYLON Loom Strapping is made in 5/32" and 7/32" thicknesses and can be obtained with plain punched holes, eyeletted holes or equipped with buckles. Try it on your own looms. Put it to the most severe tests . . . compare it with any other type of strapping. Let it prove how much loom down-time it can save you . . . how much your production of perfect cloth can be increased, by putting Gilmer NYLON Strapping on *all* your looms!

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A REVOLVING STEAM CONNECTION
Pipe sizes ¼" through 3"

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You eliminate a lot of expenses when you install ROTARY UNIONS on your slashers, dry cans, calenders, embossers, and printing and coating machines.

You eliminate high installation costs. ROTARY UNIONS are self-contained units with built-in flexible hose connections. They need no complicated piping and brackets and can be installed in less than 15 minutes.

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Install ROTARY UNIONS in place of stuffing boxes, packing joints, or steam joints and cut your mechanical maintenance to zero. Write Department 3B for full information.

Deliveries from stock.

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observed along every street of every American city. Differences in clothing as a measure of social rank have practically disappeared from American life. Nowhere else in the world does this democratic situation prevail to the degree that it does here, even though mink coats do set apart certain classes.

The transformation which man-made fibers have brought to the wardrobe of the average American woman has been dramatic and far-reaching. Where grandmother once had a single Sunday dress of silk, the raiment of royalty, to be sure; possibly one woolen suit, and few cotton house dresses, granddaughter now has a whole wardrobe of garments for every occasion.

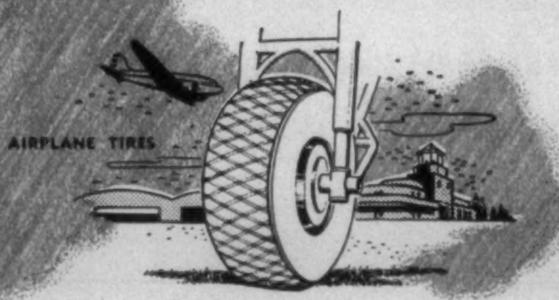
Why so many new fibers, you probably wonder. With the rayons, acetate, nylon, glass and others already established, you might wonder about the effects of Orlon acrylic fiber, Dacron polyester fiber, dynel, Acrilan, Vicara, and many, many others.

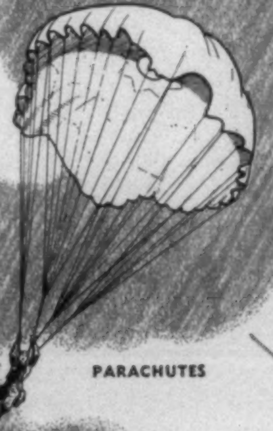
The answer is in two parts. The first deals with progress and the need to go ahead to improve the fibers and fabrics we already have and to create new and better ones. The second part of the answer lies in the fact that there is no universal fiber. There never has been and there probably never will be. In every fabric application, a combination of properties is required to accomplish the job at hand.

In some cases—such as nylon in hosiery, cotton in bath towels, and Orlon for exposure or bulk—the combination of properties is supplied by a single fiber. In other cases, however, a combination of two or more fibers is required to do the job best.

Competition and changes resulting therefrom are not new in the textile industry. In 1800, for example, wool was the predominant fiber of the world, being used in a 20-to-1 ratio over cotton. Today, cotton is used in a ratio of about seven to one over wool. With it all, however, the total use of wool has increased tremendously. The use of cotton has merely increased faster.

Actually, the textile business is much too vast to be captured by a single fiber and it will not be taken over overnight by any small group of fibers. The industry today is composed of many fibers, each of which is serving specific uses. It is also a dynamic industry, constantly in search of new





What do all these products have in common?

You don't have to analyze these products too carefully to realize that they are all products in which textile fabrics are used. What is not so evident is the fact that these and thousands of other industrial, military and consumer items like them are manufactured from plied or twisted yarns to give them greater strength, elasticity and longer wear.

To enable mills to produce the wide range of plied, twisted, or novelty yarns needed, there are more than thirty (30) models and types of twisters manufactured by Whitin. Because the proper twisting of textile fibers is an important and complicated operation, there is a Whitin twister designed especially to meet every requirement — a twister with an outstanding achievement and production record behind it.

If you have a twisting problem or need, why not bring it to Whitin — largest manufacturers of twisters in the world?

Write today for descriptive literature giving complete information about Whitin twisters.

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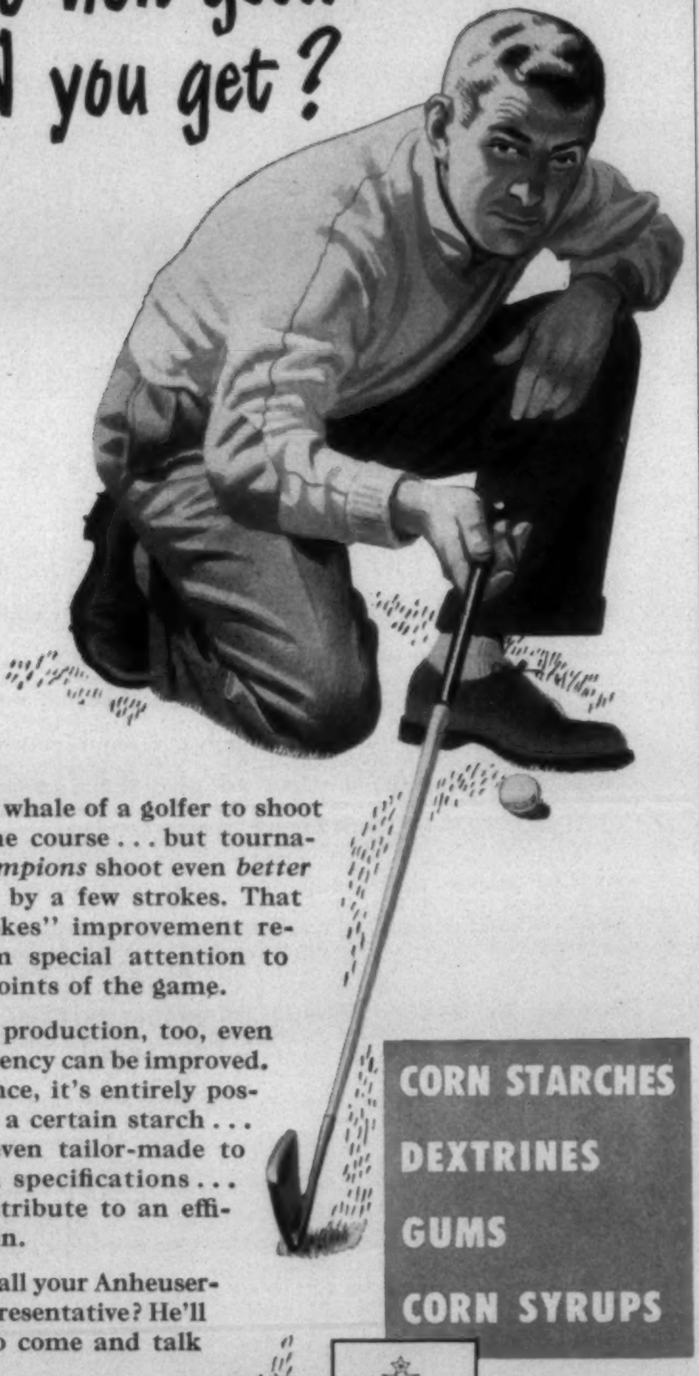

Just how good CAN you get?

It takes a whale of a golfer to shoot par for the course . . . but tournament *champions* shoot even *better* than par, by a few strokes. That "few strokes" improvement results from special attention to the fine points of the game.

In textile production, too, even *good* efficiency can be improved. For instance, it's entirely possible that a certain starch . . . perhaps even tailor-made to your own specifications . . . could contribute to an efficiency gain.

Why not call your Anheuser-Busch representative? He'll be glad to come and talk it over.

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products and it is quick to accept those which demonstrate merit. As an example, the production in 1920 of rayon and acetate totaled 10.1 million pounds, while by 1951 it had grown to 1,293.5 billion pounds.

The people who adapt themselves to new conditions have the opportunity of finding themselves in situations that can be profitable beyond any expectations. The advent of man-made fibers creates greater opportunity for innovation. The man who can take the pulse of the market and manipulate these fibers into something really wanted by consumers has tremendous freedom of action and unlimited opportunity. He is participating in the progress being brought about by these new fibers.—*George S. Demme*, Du Pont textile fibers department.

Publicize Inventions

PERUSAL of the *Official Gazette*, published weekly by the U. S. Patent Office, reveals an astonishing number of patents granted to inventors scattered throughout almost every community from coast to coast. How many dreams of fame and riches are bound together between those two blue covers? Mostly they are the hopes of little people scarcely known beyond their own immediate environment. "Who will make and sell my idea?" —or, "Who will buy my idea?" they ask. National Patent Council suggests that a few grains of business sense and salesmanship would help some of these dreams to materialize into successful reality. One thing the inventor could do would be to report his patented invention to the trade magazines related to the purpose of the invention.—*Patent Research Reports.*

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Product of
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now a *four star* product

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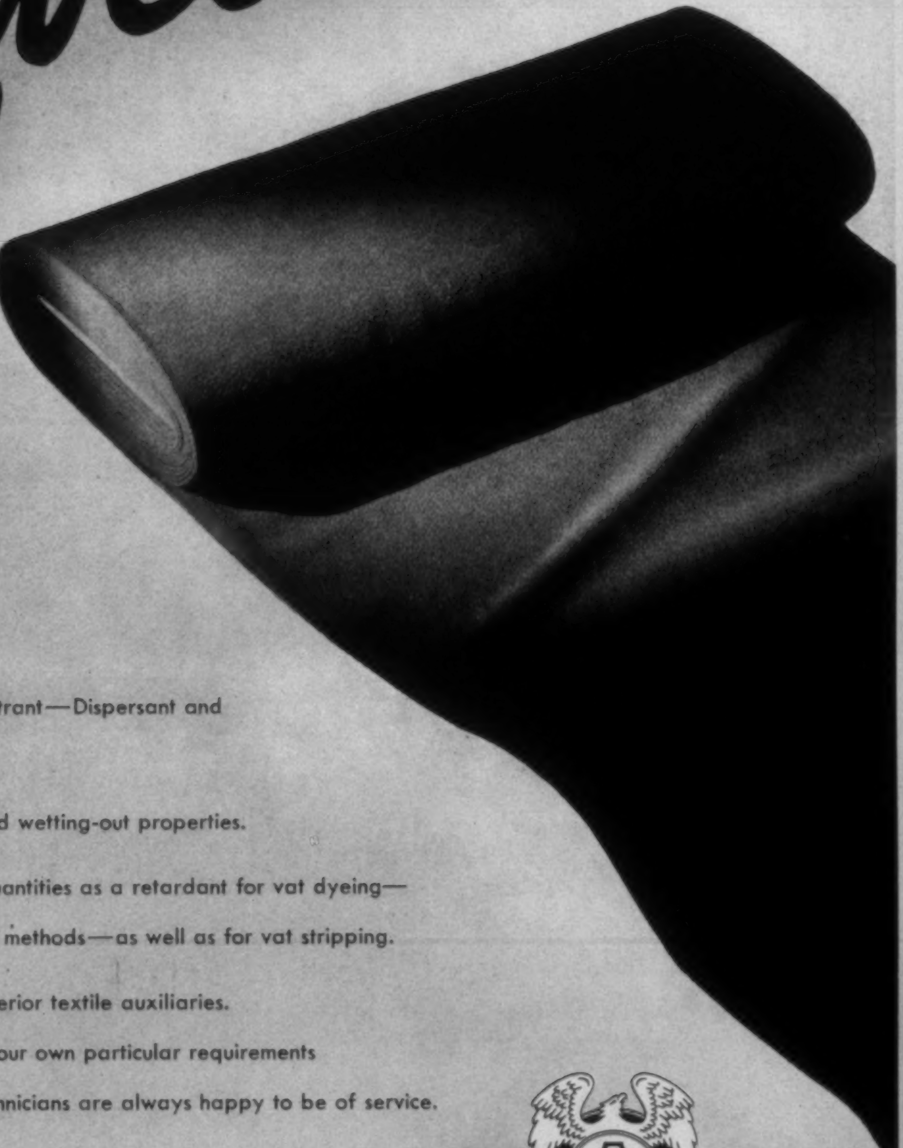

★ *wetting-out*
★ *preparing*
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An effective Leveling agent—Penetrant—Dispersant and active Stripping Catalyzer.

New Levelene has greatly improved wetting-out properties.

Particularly well suited in minute quantities as a retardant for vat dyeing—either in the pigment pad or reduced methods—as well as for vat stripping.

Another of the A.A.P. range of superior textile auxiliaries.
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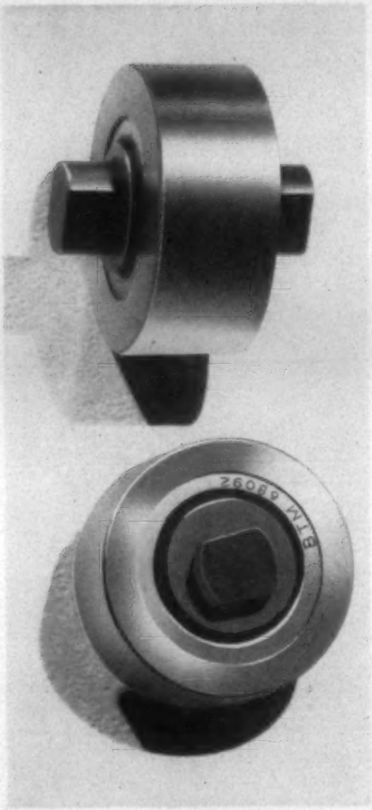

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Lubrication is completely sealed into these finer, longer lasting BTM Treadle Rolls, requiring a minimum of service. Ends are perfectly milled to fit treadle slots.

Use of BTM Treadle Rolls will eliminate fires, and stop down time resulting from treadle pin or roll failures.

For complete satisfaction, and for better performance always, specify BTM parts.

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The SOUTHERN TEXTILE HERITAGE

By W. M. McLaurine

— Part One of a Series —

THE textile industry of the South, with its whirling spindles and happy workers, is making many valuable social and economic contributions today not only to the South but to the nation. Through its long, toilsome, and trying history it has struggled until today it is the pride of the nation and stands on a pinnacle of success respected by all people.

Its manifold needs require the aid of a million workers and its manifold utilities bless every citizen of this nation.

No longer is it the focal point of poverty, ignorance and exploitation as it has been regarded by some people so often in its eventful evolution. It stands out royal in its own rights, respectable in its evident and recognized policies of social desires and contribution; no longer does the finger of the social scavanger or the parlor pink reformer point at it with scorn and derision.

The industry today is the approaching culmination of the policies and precepts that promoted its initiative and kept it alive through its trying days and furnished a stimulus for its continued growth which so manifestly and gloriously expresses itself in its now golden age of social and economic success.

To those who have passed their three score years and ten, there are facts and emotions, contrasts and congratulations, pride and exultations that are not and can not be a part of those who have only recently entered the industry.

The founding fathers who wrought so well, who planned so well, who fought so hard, who suffered at times partial social and financial ostracism, did not live to see the fruits of their efforts fully ripened—their social and financial efforts finally recognized and accepted.

Nature allots to each man only so much effort and then his personal work must be handed on to others. Those others are their descendents or the descendents of other men of like age—wonderful inheritors they are, and still progressing are the mills. But there is something that these older men had that their sons or other sons do not have that causes a vacuum in their industrial experience and in their social outlook.

The founding fathers lived in a day of slowly developing science, a day of difficult financing, a day of slowly developing Southern economy and a lack of trained specialists. Their mills were clumsy compared with mills today, their supervisors in most instances were job-trained and with no scientific background, their workers often poor and largely uneducated, their financing was dependent often upon exploiters in the money markets and markets were difficult and poorly understood. Secrecy, tradition and aversion to change were characteristic of many mills.

And yet these founding fathers were not ignorant of these facts. They rapidly set to work to overcome these adversities. They lived long enough to see that their ideas were gradually lowering these barriers and that their plans and precepts were well founded.

These young or middle aged executives, although they are scientifically trained, have never had the refining and purifying industrial experiences of their forebears. They are doing a splendid job but those who never look

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SUPERINTENDENT

Whether You Are...

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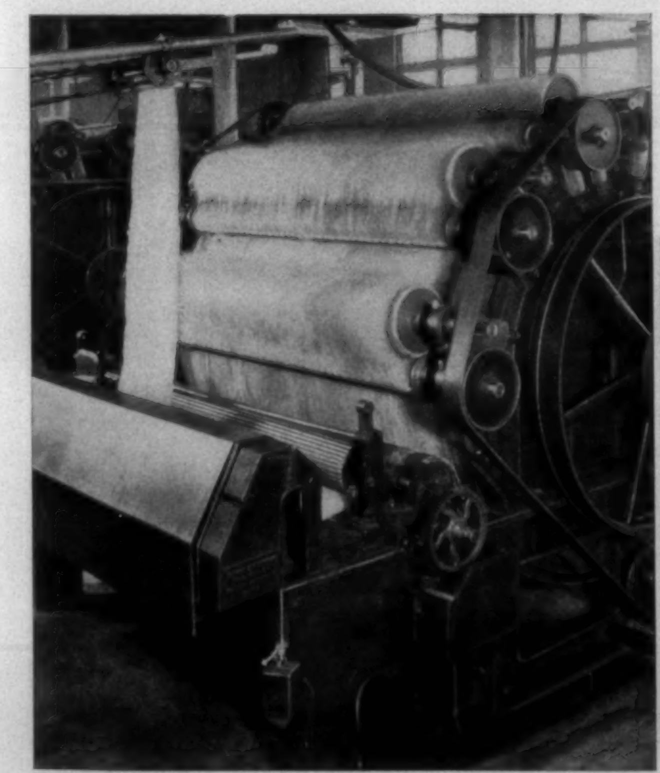
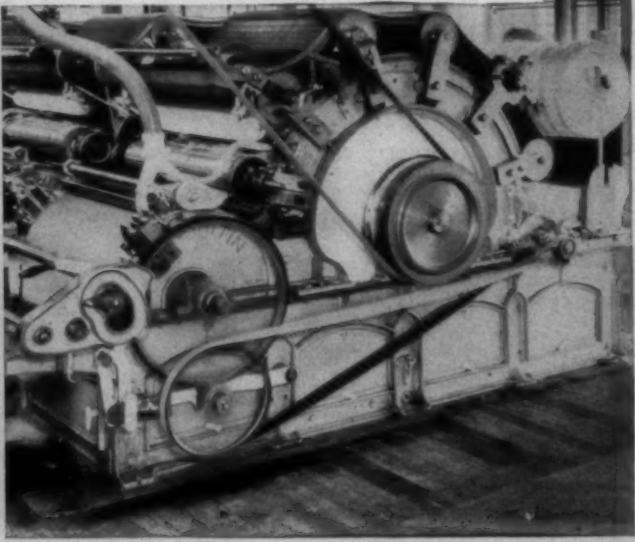
The Quality of Your Card Clothing is vitally important

MANAGEMENT and PRODUCTION know that top quality card clothing means greater production, fewer down-hours, lower carding costs. PURCHASING knows that buying the best is the only real economy in the long run.

That's why those who have once used TUFFER, always reorder it. TUFFER means proved production performance.





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Southern Plants: Atlanta, Georgia and Gastonia, N. C. **Branch:** Philadelphia, Pa.

A-2

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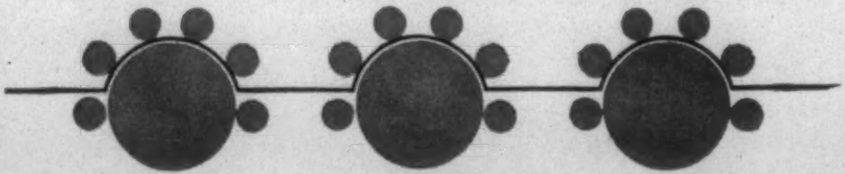
Booth *Originators of* **STRIP-O-MATIC ***

CARD CLOTHING NEWS AND VIEWS



NEW TYPE CARD CLOTHING PROVED IN MILL OPERATION

YOU GAIN THESE BENEFITS WITH

STRIP-O-MATIC

CARD CLOTHING

In the last two years STRIP-O-MATIC has been put to work in more than 200 textile mills, carding practically all textile fibres. The following reports from pleased users are typical.
Cuts Stripping Waste by Two-thirds **reports a prominent Pennsylvania woolen manufacturer running fleece, top and synthetics.**
Runs to Nine Months Without Stripping, **the record achieved by a Philadelphia nylon spinner. With conventional clothing, stripping was required every two to three weeks on an eight-hour shift—weekly or oftener with two-shift operation.**
Color Lots Are Run Complete **without stripping. Many modern carpet plants are able to run up to six weeks without stripping. With the conventional clothing that STRIP-O-MATIC replaced, stripping was necessary every day or two.**
Savings Up To $1,000 Per Year **by eliminating waste stock in stripping from a STRIP-O-MATIC equipped breaker card, are reported by a prominent Canadian Mill.**
Performance Record. **A finisher card with conventional clothing ran 24 hours—stripped 2 lbs. waste. A finisher with STRIPO-MATIC ran twelve days (24 hours per day)—stripped 6 oz. Carding was excellent, good web, no fibre damage—saving $170 on one finisher in 12 days.**
Typical User Comments: **Less Fly, Greater Strength, Greater Production, Less Shrinkage, Better Quality, Stripping is Easier; Working well on 70 wool.**
A Benjamin Booth representative will be glad to call to help you achieve similar results with STRIP-O-MATIC.

Sincerely yours,
E. Allen Snape, Jr.

E. Allen Snape Jr

President
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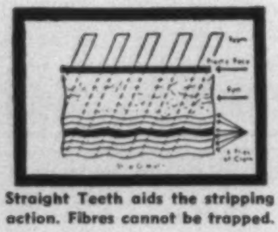
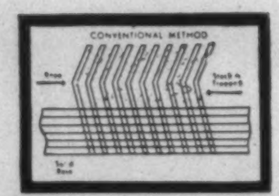
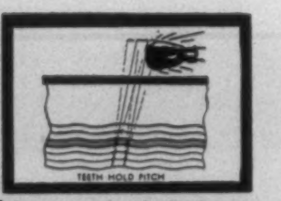


Straight Teeth aids the stripping action. Fibres cannot be trapped.



Bend in teeth traps fibres below the knee of the teeth.



Extra strong longitudinally—designed to cushion the effect of blows.

* Patented (R)

BENJAMIN BOOTH CO., ALLEGHENY AVE. & JANNEY ST., PHILA. 34, PA. **Booth**

back over the field of experience are likely at times to become discouraged or to try something that has failed to work.

These founding fathers had ingrained into their life certain definite principles that could not be destroyed. The mills were not too large and the day of scientific specialists had not arrived as it has today. They were students in the University of Hard Knocks and they learned their lessons well. They knew men, machinery and materials from first-hand knowledge. They had giant minds and they stand thus with practical knowledge. They had no push button for information. They had it or they got up and secured it.

These days have passed—thanks be to science and modern progress. This is no nostalgic story of wanting to return to the old days. It is a plea for those who are now in charge of these mills not to forget that personalities without science gave to them a successful industry that must be advanced with science acting under the impact of intelligent and active personalities.

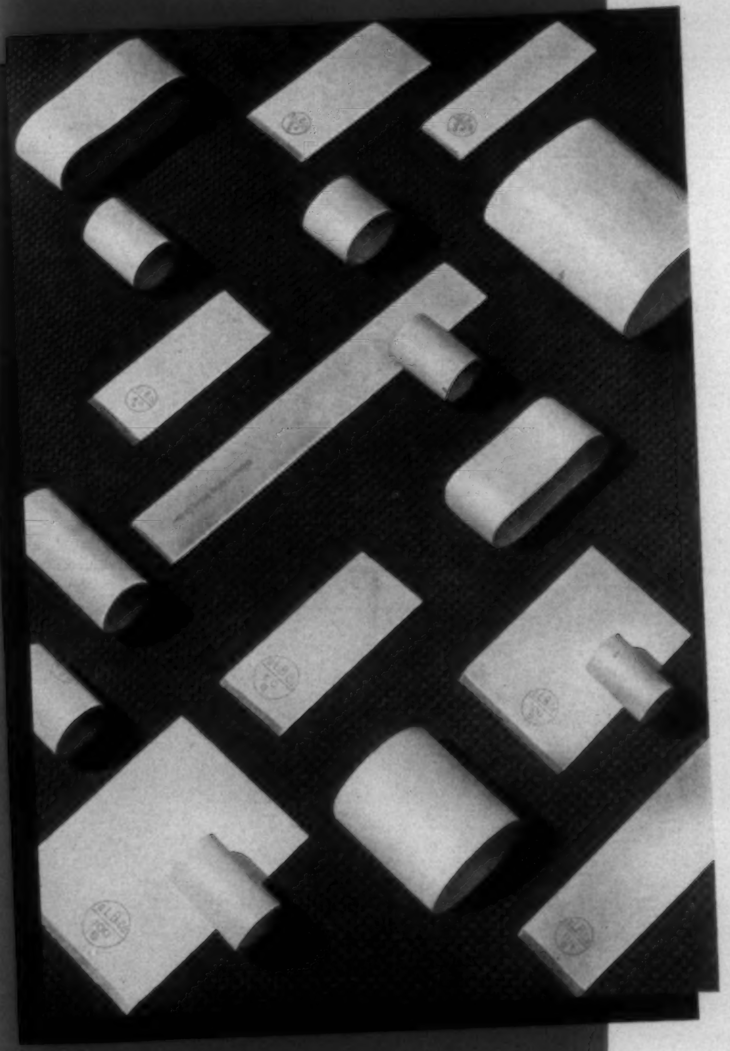
I shall try to write, in forthcoming issues of TEXTILE BULLETIN, a series of articles largely educational and at times emotional, endeavoring to portray some of the fundamental characteristics of our textile forebears, their problems and how they met them, some of their experiences, their failures and their successes.

There is a purpose in my mind which I trust I can execute. That purpose is to analyze certain qualities of mind and conditions of industrial life through which these men traveled, and indirectly to pay homage to their indomitable courage and energies and efforts. These stories, if I succeed, will also give to those now in charge of the properties a feeling of pride that they are the successors of these noble men. It will give to them an assurance that they are the directors and administrators of a fundamental industry that serves the nation. The new executives are worthy successors and they now have scientific mills, scientific supervision and their workers are well trained, well paid and are the highest type of any large group of workers in the world.

Lest we forget, I am making these efforts.

BLUE ☆ STAR

ONG DRAFT SPINNING APRONS



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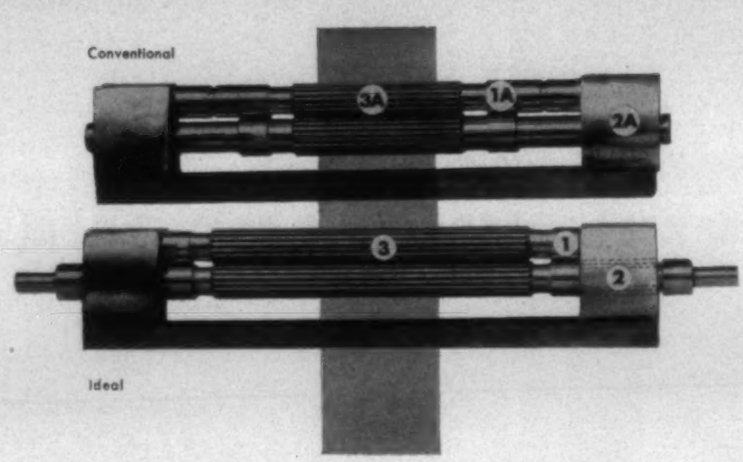
Uniform Thickness
Perfect Balance
Strong Laps
Better Drafting
Accuracy to Exact Specifications

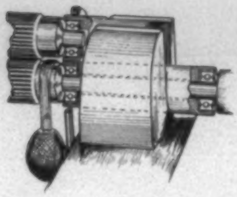
Blue Star Long Draft Spinning Aprons require a special selection of leather of the highest quality. Blue Star leather is entirely free from any imperfections whatsoever. In addition to this, the Blue Star Aprons are made by experienced craftsmen with expert workmanship.

Double Duty Blue Star Leather Aprons, used on both single and double system frames, give superior service and precision drafting. They are made from both Bark and Chrome Leather.

We will be glad to assist you with your apron problems.

CHARLOTTE ***Leather Belting Company***
CHARLOTTE, NORTH CAROLINA





This Picture can be Worth $1,000.00 per Drawing Frame to you

This comparison between Ideal High Speed Drawing Units* and ordinary units shows why Ideal produces almost twice as much sliver, saves over 58% in maintenance costs, produces stronger and far more uniform roving, and nets you, during its lifetime, at least $1,000.00 per frame in operational savings alone.

Perfect Alignment and Synchronization

In ordinary units, the spacing collars (1A) transmit most of the power, and unequal wear starts almost immediately. This causes misalignment of rolls and unequal tension between roll sections . . . bruising and shearing the stock and causing thick and thin places in the sliver. Ideal spacing units (1) ride on ball bearings on the drive shaft and transmit no power, never wear, never cause misalignment or unequal tension between roll sections, and permit Ideal units to produce uniform stock at continuous high speeds.

No Friction or Wear on Bearings

The entire weight of ordinary rolls rests on this roll neck (2A). This causes wear and high power consumption. On Ideal units (2) the weight is supported by the outer housings of the spacing units (1) and no friction is transmitted to the necks, which run freely in the ball bearings. This permits smooth, quiet, high speed operation at extremely low cost for power.

Extra Width Hardened and Ground Fluted Section

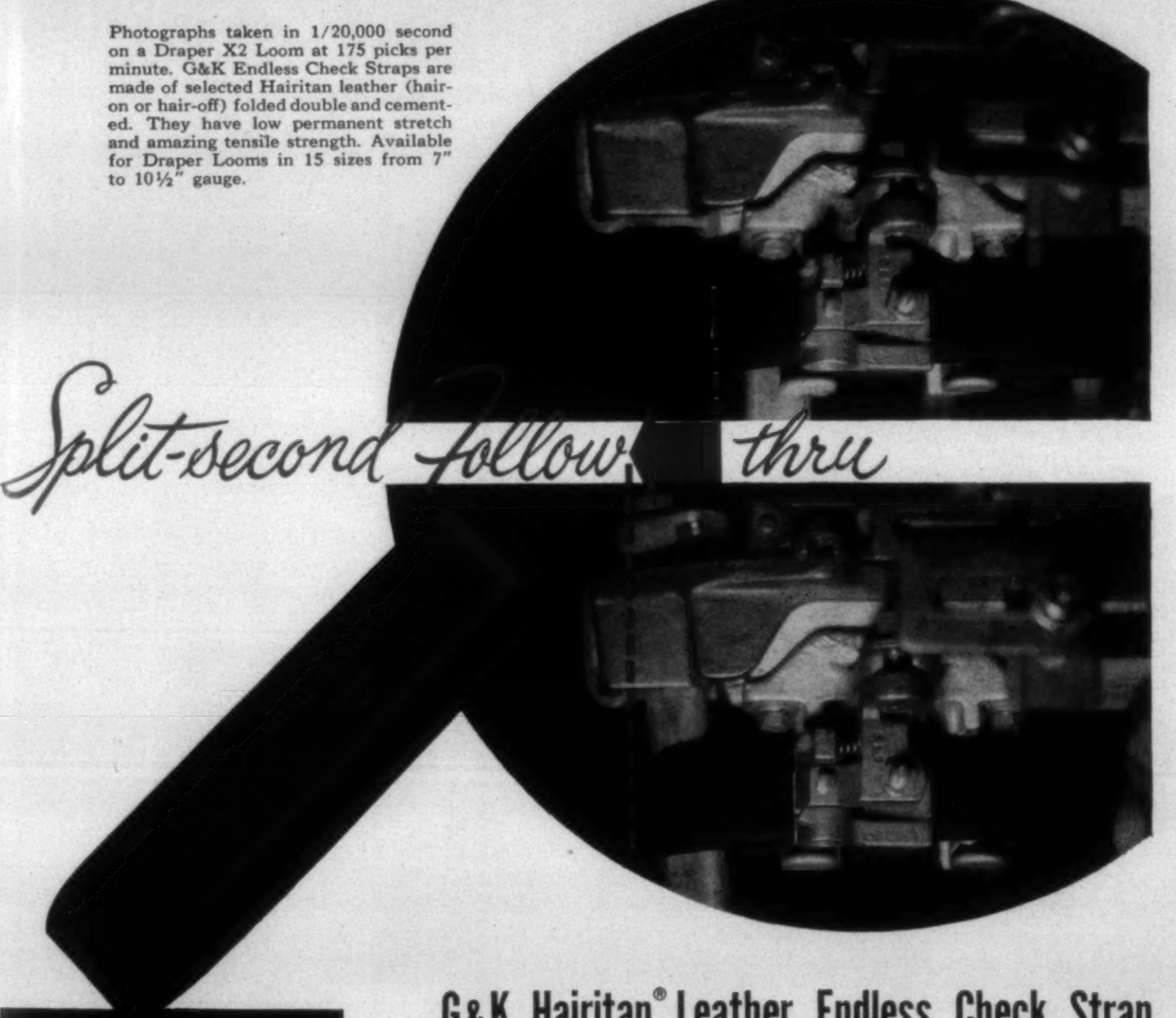
Ideal's 10½ inch fluted sections (3) can be operated with the conventional 6 to 10 ends up at back, or from laps 18 ends up, and can take 9 inch laps direct . . . far more versatile than the conventional 6 inch flutes (3A). Fluted sections are hardened and ground to prevent nicking, burring, lap-ups and work stoppages, and to assure better crimping action.

Ideal's superior construction permits higher sustained speeds and smoother operation, eliminates 90% of the ordinary downtime for frequent cleaning, removing nicks and burrs, and oiling; and cuts operating labor costs. Actual production records from some of the finest mills show that our claim of $1,000.00 savings in operating costs is conservative. Let us show you how you can profit by installing Ideal High Speed Ball Bearing Drawing Equipment in your mill.

Ideal Industries, Inc.
Bessemer City, N. C.

*Patented

Photographs taken in 1/20,000 second on a Draper X2 Loom at 175 picks per minute. G&K Endless Check Straps are made of selected Hairitan leather (hair-on or hair-off) folded double and cemented. They have low permanent stretch and amazing tensile strength. Available for Draper Looms in 15 sizes from 7" to 10½" gauge.



G&K Hairitan® Leather Endless Check Strap cushions the stick—prevents shuttle bounce

CUT SHUTTLE COST
(No hot spurs)
STOP KINKY FILLING
(No shuttle-bounce)
REDUCE BANG-OFF
(Perfect boxing)
INCREASE PROFITS

CATALOG presents the complete line of Textile Leathers for weaving — also aprons and tapes for the woolen and worsted industry. Ask for a copy on your letterhead.

Notice how the G&K Hairitan Endless Check Strap — gliding through *two* sets of fingers beneath the box — rides with the picker stick to the end of the lay. This is smooth, positive *follow-thru* checking action. The strap conforms to the angle of the stick and holds it straight and true. The stick comes to rest gently and evenly, *without bouncing the shuttle.*

Follow thru with Orange Line Loom Leathers. More than 50 various loom leathers are available to help loom tenders get more yardage with less waste and down-time.

second century G and K **Orange® Line Textile Leathers**

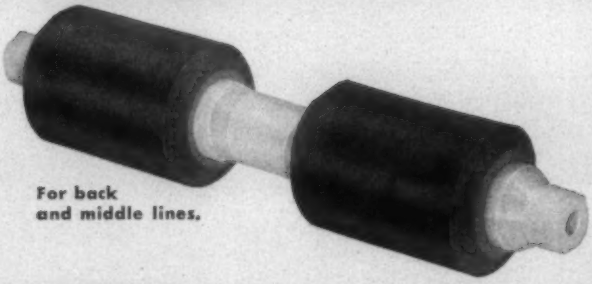
GRATON AND KNIGHT®

GRATON & KNIGHT COMPANY, Worcester 4, Mass. DIXIE **DIXIE LEATHER CORPORATION, Affiliate, Albany, Ga.**

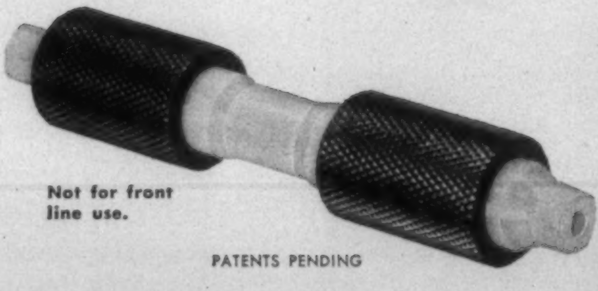
When you use **CLEANDRAFT** NYLON-BEARING NON-LUBRICATING TOP ROLLS

AT THE NEW LOW PRICE, THEY RAPIDLY PAY FOR THEMSELVES:

- eliminate all lubricating effort.
- give much cleaner yarn due to complete freedom from lubricant.
- important savings on picking and cleaning.
- installed in normal manner without extra cost.



For back and middle lines.



Not for front line use.

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Rayon Reports

Prepared Monthly by American Viscose Corporation, New York, N. Y. March, 1952

CONSISTENT GAINS MADE BY RAYON IN MEN'S APPAREL IN 1951

Figures just released by the U. S. Census Bureau reveal that rayon made substantial gains in men's apparel during 1951. During 1950, rayon led only in the "separate trouser" classification. It now also leads the "summer weight suit" and "woven sport shirt" classifications. The growing influence of rayon in year-round suits is shown by the 261% increase in this field.

These gains were made in a period when total production of all categories was reduced. They offer graphic proof that emphasis on rayon by the men's wear industry is a fast growing trend.

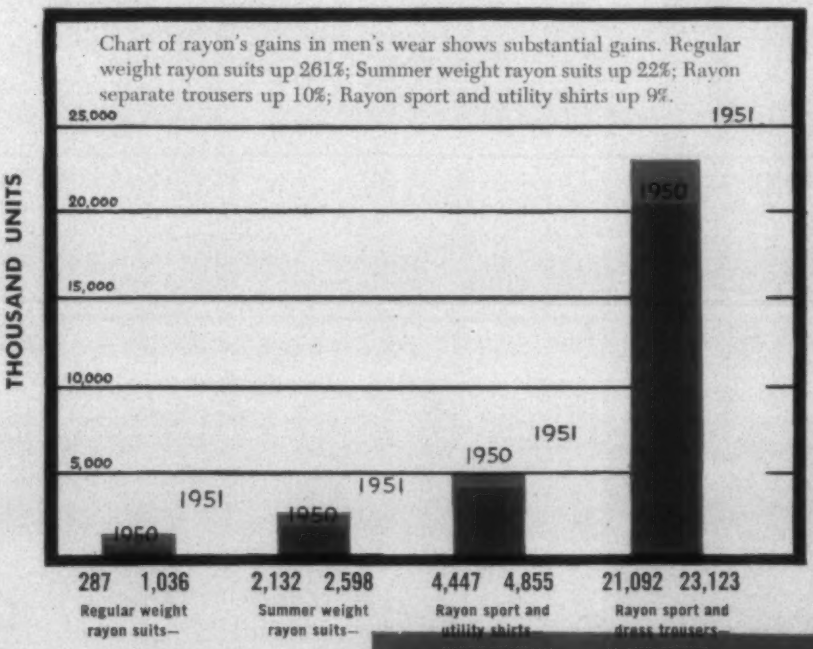


Chart of rayon's gains in men's wear shows substantial gains. Regular weight rayon suits up 261%; Summer weight rayon suits up 22%; Rayon separate trousers up 10%; Rayon sport and utility shirts up 9%.

Avisco Filatex yarns contribute to progress of foundation garment industry

Two-way-stretch Girdle made from Avisco Filatex Yarns by The Wispese Company, 302 Fifth Avenue, N. Y.

Filatex, Avisco's elastic yarns have made important progress in the girdle industry.

These yarns produce fabric constructions that combine a soft hand and light weight with lasting elasticity, durability and excellent laundering qualities. Filatex yarns also are used in the manufacture of swimming suits, surgical stockings and hosiery. Further development of these yarns is being undertaken by the Avisco Textile Research Department. Inquiries about this work are invited.

MAKE USE OF *Avisco*®
4-PLY SERVICE

To encourage continued improvement in rayon fabrics, American Viscose Corporation conducts research and offers technical service in these fields:

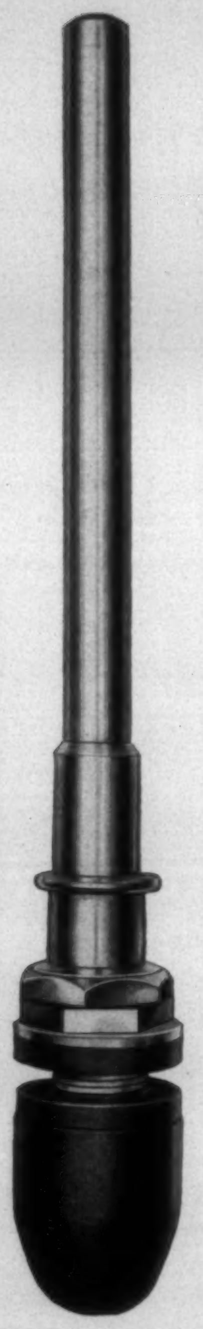
1. **FIBER RESEARCH**
2. **FABRIC DESIGN**
3. **FABRIC PRODUCTION**
4. **FABRIC FINISHING**

AMERICAN VISCOSE CORPORATION

World's largest producer of rayon

Sales Offices: 350 Fifth Avenue, New York 1, N. Y.; Charlotte, N. C.; Cleveland, Ohio; Philadelphia, Pa.; Providence, R. I.

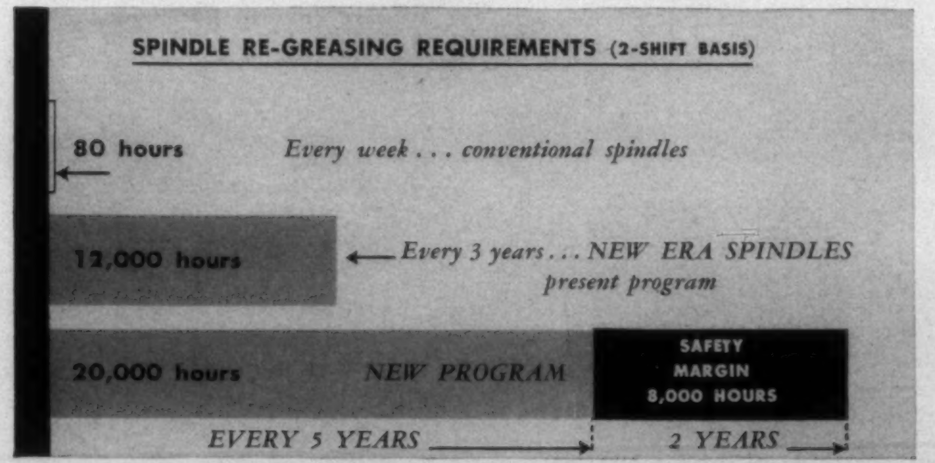
How many times have you oiled your conventional spindles since 1945?



New Departure engineers recently reported on a test made on **NEW ERA SPINDLES** that had been running for **seven years** in Chicopee Mills, Chicopee Falls, Mass., at 10,000 rpm, 16 hours per day, five days per week:

> Even after seven years of continuous service (on two shifts) without relubrication, a 100% noise test showed that 283 out of 284 bearings were in excellent condition.
>
> There is still enough grease remaining for further service without lubrication.
>
> It would appear that extending the regreasing period to five years would be a safe procedure.

On the strength of this test and others still in progress, we expect soon to announce the extending of our former 3-year re-greasing recommendation to a 5-year re-greasing program . . . with a factor of safety of **two years beyond that!**



On request, a Saco-Lowell engineer will be glad to make a study of the operation of your present spindles, and indicate the specific advantages of installing New Era Spindles.

SACO-LOWELL

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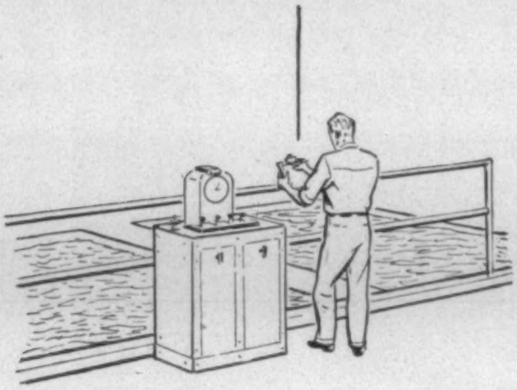
SALES OFFICES: CHARLOTTE • GREENVILLE • ATLANTA

ANOTHER EXAMPLE OF
INCREASED EFFICIENCY
AND LOWER COSTS
RESULTING FROM A
**DU PONT
BLEACHERY SURVEY**



MILL SAVES OVER ONE MILLION GALLONS OF WATER PER WEEK!

"Recirculate final wash water through the caustic washers and use a milder bleach!" These were the recommendations made by the Du Pont men after a recent survey of a mill's bleaching process. The results: a saving of over one million gallons of water per week . . . improved fiber quality . . . and reduced consumption of chemicals and steam.

Here's how a Bleachery Survey can help *you* increase production...cut costs

A Du Pont Bleachery Survey gives you the information you need to keep your present bleaching system operating at peak efficiency.

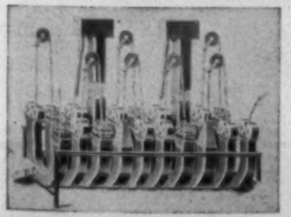
Du Pont surveys are conducted by men with wide experience in textile bleaching. Without interrupting production, these men spend from one to three days in your plant—examining fuel, water and chemical consumption, checking cloth production, and studying the quality of finished goods.

In addition to this check on processing technique, cloth samples are taken at the end of each major step in the bleaching process. These samples are sent to Du Pont laboratories where they are thoroughly analyzed for whiteness, whiteness retention, fluidity, absorbency and non-fiber content.

After the survey and laboratory tests are completed, the results are carefully evaluated in the light of Du Pont's broad experience in textile bleaching. Then, you receive a complete, written report on the operation of your bleachery—including recommendations.

Why not find out for yourself how a Du Pont Bleachery Survey can help you increase the efficiency of your present bleaching installation. This service is offered without charge to all users of peroxide. The coupon below will bring you full information.

FOR SMALLER BLEACHERIES



The Butterworth-Du Pont "Junior" Continuous Peroxide Bleaching unit gives low-cost quality results. Capacity is 500 to 1000 lbs. of cloth per hour. Also used as an auxiliary unit in larger mills.

DU PONT PEROXIDES

FOR TEXTILE BLEACHING

Available in drums and tank cars { **"Albone" 35 . . . Hydrogen Peroxide, 35%**
"Albone" 50 . . . Hydrogen Peroxide, 50%

DU PONT
REG. U. S. PAT. OFF.

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E. I. du Pont de Nemours & Co. (Inc.)
Electrochemicals Department, Wilmington 98, Delaware

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- ELIMINATES BOBBIN DAMAGE
- LOWERS LABOR COSTS

- REDUCES SECONDS IN CLOTH
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- HIGH PRODUCTION
- LOW CLEANING COST
- LOWER MAINTENANCE COSTS

WITH TERRELL'S MODERN TYPE L QUILL CLEANERS AND HANDLING EQUIPMENT

Efficient and versatile—Terrell's Type L Bobbin Cleaner has proved that its money-saving advantages apply to a wide variety of mill conditions.

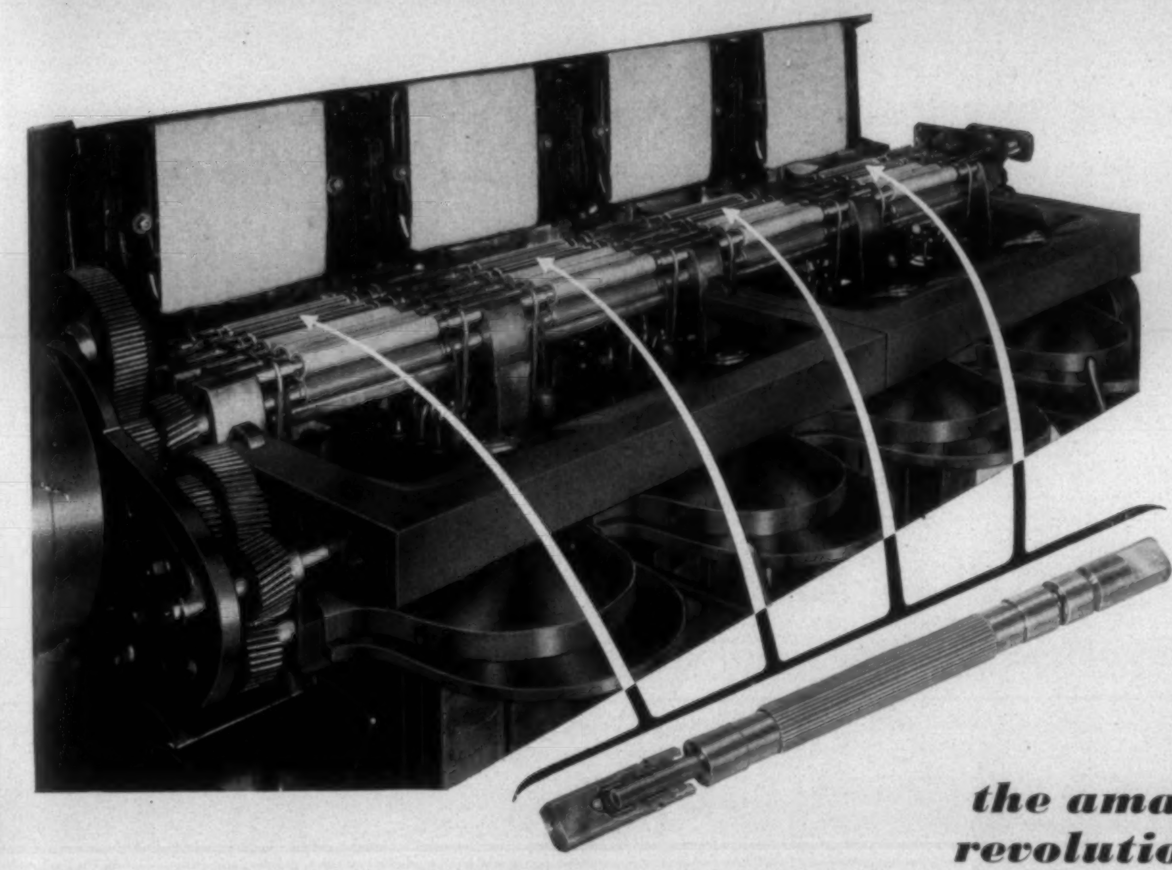
Originally used to remove continuous filament waste from automatic loom bobbins, the type L is now used for wool, worsted, spun rayon, and most all cotton yarns.

For some counts of cotton the Terrell Type K Cleaner is recommended.

Terrell field engineers are specialists in solving quill cleaning and handling problems. Call on them to recommend the equipment which will give greatest savings in your mill.

THE TERRELL MACHINE COMPANY, INC.

CHARLOTTE, N. C.



the amazing, revolutionary

RGM DRAWING FRAME ROLL

DEVELOPED and PRODUCED by GOSSETT

makes an old drawing frame better than when new!

More About the RGM METALIC DRAWING ROLL

The flutes and collars have been so hardened by the GOSSETT exclusive method that even a steel file will not cut them. The flutes on the RGM roll are so precision made that no tool marks can be found. The tolerance on the flutes, collars, and neck is plus or minus .0005.

How can we make an old Drawing Frame better than when new? The photograph above shows how GOSSETT technicians changed this old frame from one with 4 rolls 6 ends up to one with 5 rolls 8 ends up. The first, second, and third line rolls, top and bottom, are common rolls made by GOSSETT . . . the fourth and fifth line rolls are the amazing, newly developed RGM metallic rolls made by GOSSETT and which are so hard that even a steel file cannot cut them! The set-up is of graduated pitch flutes.

During the re-building process more things happened to the old Drawing Frame. The top rolls were equipped with GOSSETT roller bearing shells (there are none better) . . . so this old frame will now draft 8 to 11. Further, we installed new stands, new calender rolls, new tension train of spiral gears and studs, new drafting gears and studs, and re-built the coilers, can tackles, and installed new trumpets. Yes . . . it's an old Drawing Frame better now than when new. Takes know-how and equipment. GOSSETT has both PLUS the amazing and exclusive RGM metallic roll.

GOSSETT will also re-build Drawing Frames with the 4-roll system in the same manner.

Write for full particulars and estimated cost

B. W. GOSSETT, President E. C. MASON, Sales Manager
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GOSSETT MACHINE WORKS, INC.

GASTONIA, NORTH CAROLINA

textile bulletin

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At Long Last

On March 3, the United States Supreme Court held, by a vote of 6 to 3, that the New York anti-Communist teacher law was valid, and as there is no court to which that decision can be appealed, it becomes the law of New York and of any other state which wishes to prohibit Communist teachers from using their class rooms to sell Communism to students.

The New York law, known as the Feinberg Law, which the United States Supreme Court has upheld, requires the State Board of Regents—the administrative body which heads the New York educational system—to list subversive organizations.

The law makes membership in such listed organizations clear evidence of disqualification for any job in the school system. The law's preamble refers to the Communist Party as an advocate of violent overthrow of government.

In the majority opinion on the New York teaching law, Justice Minton said:

> School authorities have the right and the duty to screen the officials, teachers and employees as to their fitness to maintain the integrity of the schools as part of ordered society. . . . "

Justice Minton, speaking for the court majority, said he did not agree that the Feinberg Law violated freedom of speech and assembly.

He said teachers who do not choose to work under its terms "are at liberty to retain their beliefs and associations and go elsewhere."

For more than 20 years the editor of this publication has attacked the use of class rooms by professors and instructors for instilling Communism into the minds of students.

Because he dared call attention to such activities at the University of North Carolina, he was subject to much abuse and there was always the charge that he was trying to suppress "freedom of speech."

It was not freedom of speech which the professors and instructors sought but "license for propaganda."

Hundreds of times his statements were denied and he was called a liar, but when our government finally decided that Communism was not a political party but an enemy organization, and moved on them, certain of the Communists turned state's evidence and, by their testimony, every statement ever made by David Clark relative to the teaching of Communism by professors and instructors at the University of North Carolina has been proved to have been true.

At a recent meeting of the board of trustees of the University of North Carolina, President Gordon Gray said with evident sincerity that he would not permit Communism to be taught in any branch of the university.

In spite of his evident sincerity, we call attention to the following:

Bertrand Russell, a so-called philosopher, was paid to lecture before the students of the Woman's College of the University of North Carolina at Greensboro, N. C., last Fall and was introduced by Prof. Eugene Pfaff with laudatory remarks evidently for the purpose of causing the students to give weight to Russell's statements.

Who is Bertrand Russell?

(1) An Englishman who, during World War 1, was convicted of traitorous actions and served a term in an English jail.

(2) An atheist who says:

> I believe that when I die I shall rot and nothing of my ego will survive.

(3) An advocate and practicer of free love who says:

> I do not regard physical infidelity as a very grave cause and believe that young people should be taught that it is to be expected and tolerated.
>
> No marriage ceremony should be valid unless accompanied by a medical certificate of the woman's pregnancy.

While in China for the purpose of selling Communism to the Chinese, and even while visiting missionaries, Bertrand Russell shared his room with a woman who was not his wife.

(1) An avowed Socialist who accepted a paid assignment to sell Communism to the Chinese and who is partly responsible for soldiers of a Communist China shooting at American soldiers today.

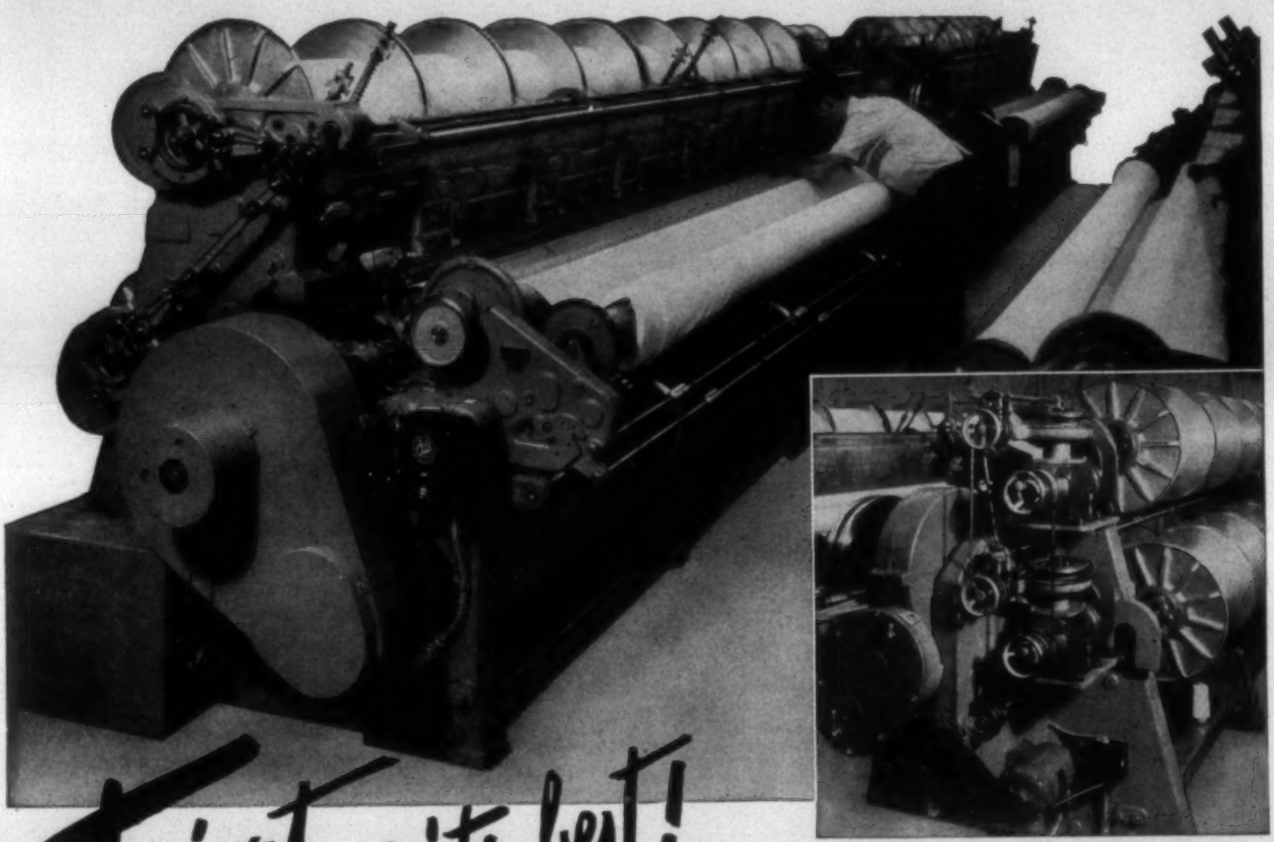
Rodney Gilbert, in his book, "What's Wrong With China?" said some years ago:

> China's future has been much more seriously prejudiced by the ideas imported and peddled by such persons as Bertrand Russell and John Dewey—than by all the opium, morphine, heroin and hashish imported or produced in China during the past three centuries.

That statement was made before the Chinese Communists, largely as the result of seed sown by Bertrand Russell and others, became strong enough to overthrow the Chinese Government and as the ally of Russia begin to kill American boys in Korea.

Bertrand Russell became qualified for becoming a paid lecturer before young women at the Woman's College of the University of North Carolina by becoming a convicted traitor to his country, an avowed Socialist and a paid agent for Communist propaganda in China, an atheist and an advocate of free love.

It is our opinion that the above stated activities made



Tricot at its best!

Quality control, ease, reliability and economy of operation are essentials of successful manufacture. The new Reiner Tricot Machine, in mill operation everywhere, easily meets all these requirements. Its automatic devices improve fabric quality and eliminate stop and shade marks. They assure a steady flow of flawless tricot cloth at top speed. Machine operation and care are made easier and yarn control more positive. Truly, here is TRICOT AT ITS BEST!

Quality knitting is only possible with quality machines. For many years and in many mills Reiner equipment has proven to be of the superior quality class. Convince yourselves by inspecting this latest Reiner machine, in action, at the Reiner plants in Weehawken, New Jersey.

WE ALSO OFFER ALL TYPES OF REINER WARPERS AND CREELS—IN SHORT, WARP KNIT EQUIPMENT FROM CONE TO KNITTED FABRIC.

FEATURES

- **Automatic beam let-off transmission and warp tension adjuster.**
- **Automatic cloth take-up.**
- **Electro-mechanical brake clutch with needle-down disc to eliminate stop marks.**
- **Instantaneous cam brake action.**
- **Motor power increased from 3 to 5 h. p. for quick level start.**
- **Automatic oil feed lines throughout.**
- **2-bar units can be changed to 3-bar units by means of split cams.**
- **Automatic guide bar lift with safety controls to shut off power when guide bar is up.**
- **Completely enclosed cam shaft to eliminate oil splash.**
- **More space provided between beams.**
- **More space from floor to lower beams.**
- **New beam arrangement.**
- **Brake on one beam feed for special knit fabric.**
- **Adjustable presser bar holder.**
- **All gauges—Knitting width 168" or 84"—Available with long needles for coarse gauge fabrics.**
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Bertrand Russell a much desired lecturer in the mind of Prof. Eugene Pfaff.

Just after permitting the vile Bertrand Russell to lecture before the young women of the Woman's College of the University of North Carolina, a request of citizens of Greensboro to permit the noted evangelist, Billy Graham, to address the students was refused by the college administration upon the grounds that his address would upset the young women's emotions.

In view of the evidently sincere statements of President Gordon Gray before the recent members of the board of trustees, we are unable to understand why Russell was permitted to lecture before the young women at the Woman's College.

Most of the Communists moved out of the Chapel Hill branch of the University of North Carolina when a new president was elected but, during the days when Communist activities were protected there, Bertrand Russell was a frequent lecturer.

After one of his lectures the *Daily Tar Heel,* the student newspaper, said:

> Much food for thought was contained in the lecture of Bertrand Russell, delivered here Tuesday night. His points were carefully but casually made, yet they left a profound impression.
>
> What Mr. Russell said can be chiefly characterized as common sense, the type of common sense which is the result of careful thinking and a long and full life. His ideas appeared unusually felicitous and acceptable, because they were the ideas most of us hold—but either can not or are afraid to express. We are delighted to hear someone set forth our thoughts, particularly a speaker who is acknowledged one of the foremost philosophers of our day.

College professors have been using their class rooms for Communist and atheistic propaganda and have been protesting themselves by claiming freedom of speech, but the United States Supreme Court has put an end to their fake claims.

The time has come to move one step further and prohibit the use of lecturers for propaganda purposes.

There should always be freedom to learn but there should never be freedom to use class rooms or lecture platforms for propaganda directed at college students.

Senator Russell's Candidacy

The announcement that Senator Richard Russell of Georgia is a candidate for the Democratic nomination for President of the United States has been favorably received throughout the South where he is held in high regard but that probably means nothing.

Any man, Southern or Northern, who becomes the Democratic Party nominee either for President or Vice-President will have to run upon a platform containing the following planks:

1. A strong central government.
2. Abolition of States Rights.
3. Socialized medicine.
4. Socialized agriculture.
5. Repeal of the Taft-Hartley Law.
6. The F.E.P.C.
7. Higher taxes.

We do not believe that Senator Russell will consent to run on any such platform and there are many people in the South who will not vote for any candidate, even a Southerner, if he is a candidate of a party with such a platform.

If an F.E.P.C. plank is in the Democratic platform, the States Rights Democratic Party will offer candidates for both President and Vice-President and the electoral vote of several Southern states will be cast for their candidate.

There is little chance that Senator Russell will change his attitude towards F.E.P.C. or give support to a platform which contains an F.E.P.C. plank.

Effort To Kill "Right-to-Work" Law Fails Again

Ever since Virginia, North Carolina and several other Southern states adopted "Right-to-Work" laws, the C.I.O. and the A.F.L. have been trying to nullify those laws and be permitted to force employers to agree to discharge workers who refused to join their unions and pay dues.

They would like to kill the anti-closed shop provision of the law but realizing that such efforts would fail they have sought to re-establish the right to have "union shops" and pretend that the "union shop" does not abridge the freedom of citizens.

Under the "union shop" plan an employer may employ non-union employees but he must discharge them if they do not join the union and begin to pay dues within 30 days.

Virginia, North Carolina and some of the other Southern states have enacted laws saying that no citizen shall be denied employment because he joins a union or because he refuses to join a union.

The "union shop" says that a man or woman who refuses to join a union within 30 days after securing employment shall be subject to discharge.

The only difference between the "closed shop" and the "union shop" is that the employee has 30 days in which to decide whether he will join the union and pay dues or be discharged.

At every meeting of the North Carolina legislature, union leaders, claiming that there is no harm in the "union shop," seek to have it authorized by amending the Right-to-Work Law, but as the people of North Carolina believe in the right of a citizen to decide for himself whether or not he will join a union, the legislature refuses to amend the law and never will.

Recently the Boothe Bill to permit Virginia labor and management to make union shop agreements was killed by the House General Laws Committee of the Virginia Legislature.

The C.I.O. and the A.F.L. will never succeed in wrecking the Right-to-Work Laws of North Carolina and Virginia.

Did Not Happen Here

Arnold Schuster, 28-year-old Brooklyn, N. Y., pants salesman, happened to recognize Willie ("The Actor") Sutton, who had a 20-year record as a big-time jewelry thief and bank robber and had been successfully sought after escaping from jail.

Schuster told the police and a short time later his corpse was found in a vacant lot, two bullet wounds in the head and two in the body.

Had such a murder occurred in the South, all the New York papers would have called attention to it with front

RIEGEL-SUEDE SHIRTINGS

For outdoor sports or indoor fun, the whole family enjoys the cozy comfort and smart styling of Riegel's new cotton flannel shirtings for Fall. They're all aglow with brilliant autumn colors, . . . designed by Riegel to bring in a harvest of sales for you.

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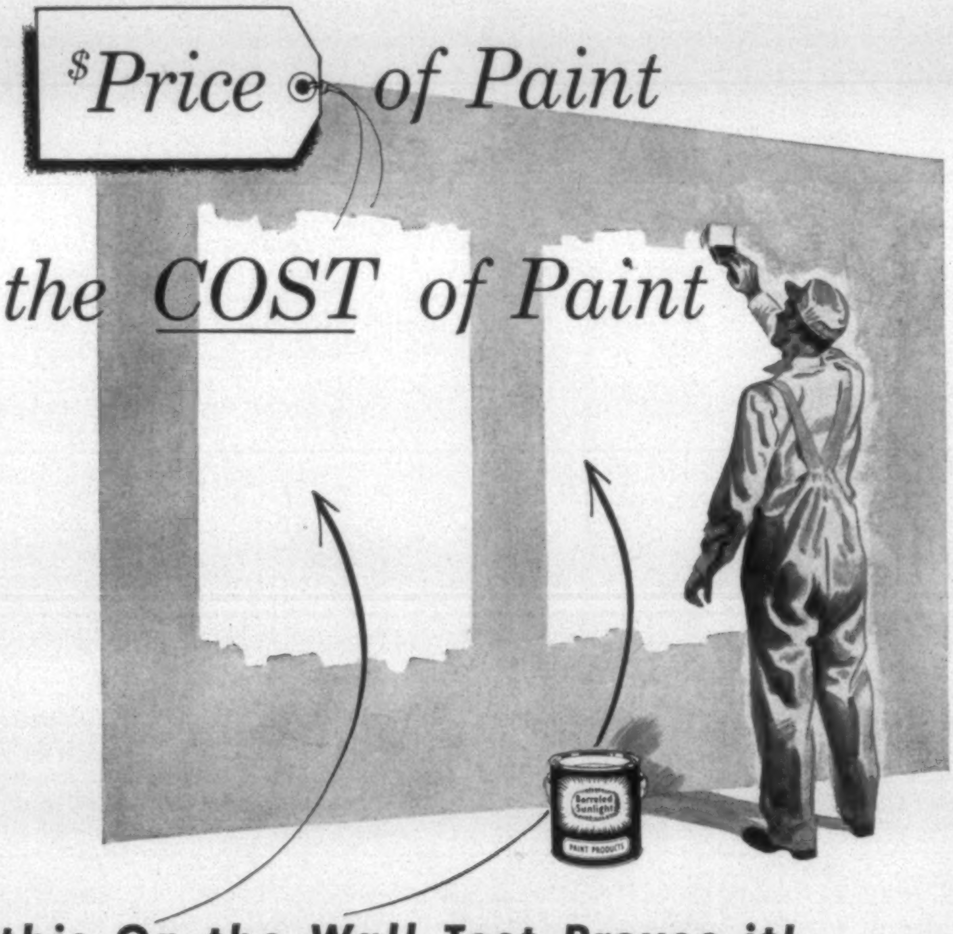

...and this On-the-Wall Test Proves it!

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Yes, figure it out . . . *to your profit* . . . with this simple on-the-wall test.

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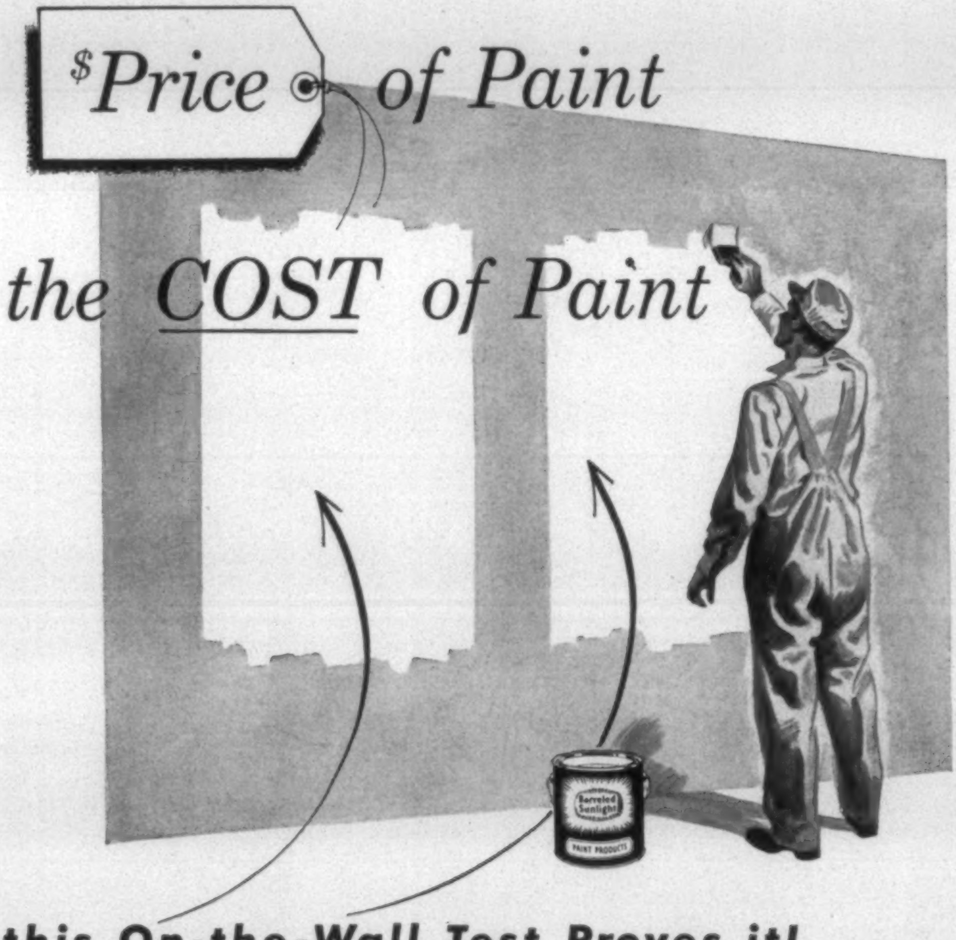

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WATCHING WASHINGTON

[Exclusive and Timely News from the Nation's Capital]

Truman is teetering on the fence on whether to run or not to run, and will not make an early decision. If Taft wins, expect Truman to run. If Eisenhower wins, expect Truman to quietly bow out, and let the nomination go to someone else, preferably of Truman's choosing. Some Truman leaders evidently are shooting with an intent of persuading Senator Russell to take second place on a ticket with Truman. They do not doubt Russell's strength in the South, and believe the gap on civil rights could be bridged.

Russell's candidacy has given the Truman leaders the hardest jolt they have had, and upset plans for drafting Stevenson. They have no real vote-getter to consider for second place. The question with them is how Northern areas where Negro voters have increased rapidly would react to a Truman-Russell ticket. There's indication that the C.I.O. would openly rebel at the idea.

Russell forces say emphatically they will have no truck with Truman or any of the present group in control of the government. Russell is known to be adamant against a Truman alliance, no matter what blandishments are offered. His aim is to spark and hold together a solid wall of opposition in the South against Truman and all of his works. In this position Russell is joined by all of his associates of the South.

Taft's rapidly growing grass roots strength, with a sharp across-the-country swing in his direction, is causing Truman forces greatest concern. Truman leaders have eagerly hoped Eisenhower could round up full Republican support without much effort, or get a nomination much as Dewey did four and eight years ago. Now they are not certain; they feel Ike is slipping badly.

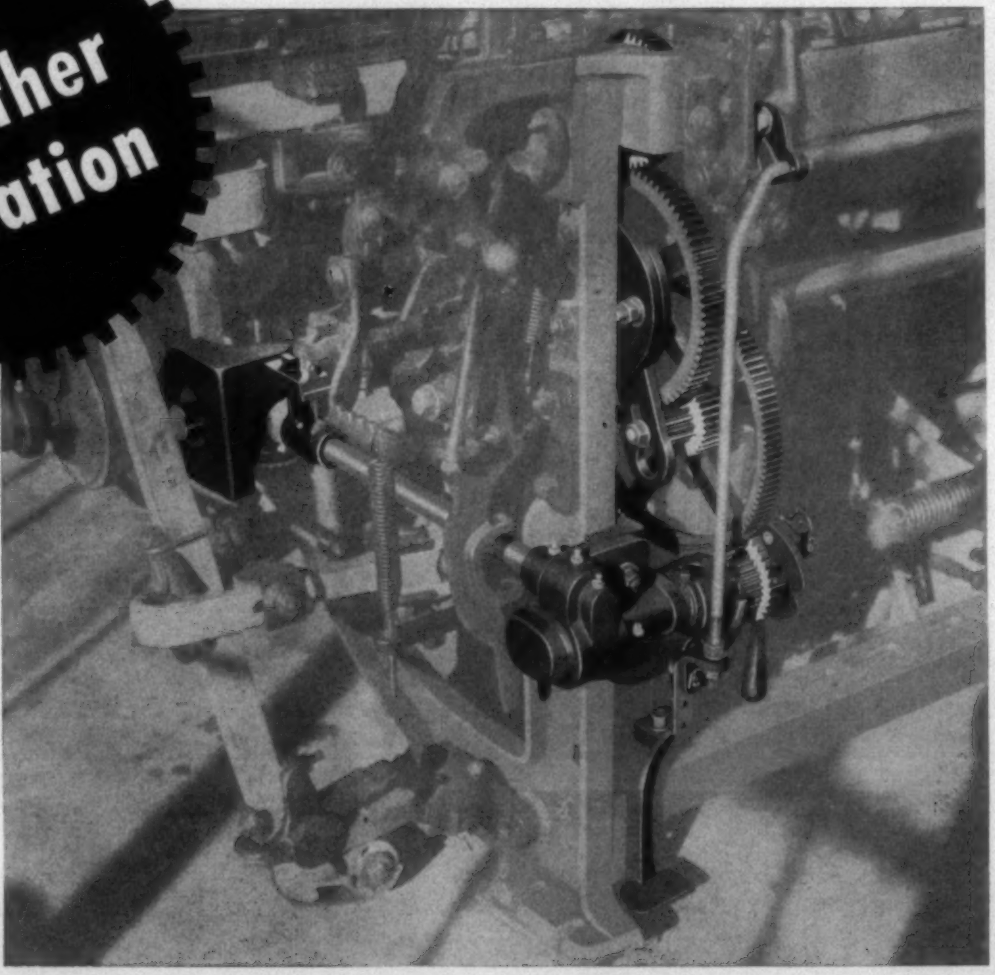
Truman is personally trying to quell the Southern rebellion by calling Russell a "fine fellow" and soft-pedaling the Truman differences with the South. Basic defect in the Truman strategy is that he is paying compliments to Russell, and ignoring such staunch Russell allies as Senators Byrd, George, Eastland, Smith, McClellan and Ellender. In this light, Truman's gestures look foolhardy.

Maine's G.O.P. Senator Brewster says it's time to smoke out Truman, and make him run as a Trumancrat candidate on his record. He says Truman personifies his record for good or evil more than any other man, and with the avalanche of scandals, he is the one who should defend it. Brewster asserts Truman could not win under any conditions.

Attorney General McGrath's defiance of the Chelf committee of the House to turn over Justice Department records directly challenges basic authority of Congress. Congress has always claimed authority of access to any record. However, in recent years Truman has defied this authority by refusing to allow his aides to be questioned.

Majority leaders in Congress urged Truman to yield on the point, and allow access to the records. He was told that denial of access in an election year, with the stench of scandals spreading over the country, could be disastrous and give the G.O.P. its most explosive ammunition. Republicans

For Smoother Operation



BAHAN Worm Take-Up Assembly for E, K and modified D model looms

Here's an assembly to replace ratchet type take-ups that provides smoother operation and consistently better fabric quality around the clock. The Bahan Worm Take-up assembly is complete with all parts and finest machine-cut gears throughout. Has dependable steel driving gear on cam shaft. Change gear stud supplied with floating bronze bushing (Change gears furnished for any standard ratio). Grease or oil lubrication as specified. Bahan will be glad to supply full details of this cost saving assembly for your consideration. Write today! Bahan can also supply individual take-up gears for all other loom models.

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charged that Truman was only trying to protect some cronies mixed up in the scandals.

Statehood for Alaska and Hawaii does not seem likely in this session of Congress in the face of almost solid Southern opposition. The opponents say result would only be to put more Administration supporters into the Senate and House, and offer new sinkholes for drawing funds and grants from the Treasury.

In calling up the bill to return submerged tidelands to the states, the Senate struck a hard blow for states' rights. After the bill was called up, Truman launched a move for a compromise between federal seizure and state ownership. The aim was to sidetrack the quit claim bill for one which would leave the Federal Government in nominal control, and susceptible to later tightening.

Truman promises to veto the tidelands quit claim bill if it is passed, and Congress expects him to do so. However, Congress is merely writing a record in the matter, for a veto cannot be overturned, with the intent of bringing up the issue in the next Congress, when they hope for a new White House occupant. There is no evidence of "big oil companies" supporting the quit claim bill.

The tidelands issue as presented in the Senate points to the seizure of submrged lands as the rankest invasion of states' rights in almost 100 years. It was engineered by the late Harold Ickes in adroit moves before friendly federal judges, who held the Federal Government per se had "paramount rights in, and full dominion over the lands." Court decisions for over 200 years were to the contrary.

The Administration's $8 billion foreign aid program is in for rough sledding and probably a 50 per cent cut. All of the $2.5 billion asked for economic aid abroad will probably be wiped out. Chief claim for the huge spending proposal is that cuts will jeopardize all such money spent in former years. But Congress is asking where this spending is going to stop, anyhow.

Truman's contention for more foreign aid is that great "inspiration" has been given to Europe by the outpouring. If the aid is cut off, he claims, the whole defense structure of Europe will be undermined, the hope for peace will fade, and the Kremlin will profit.

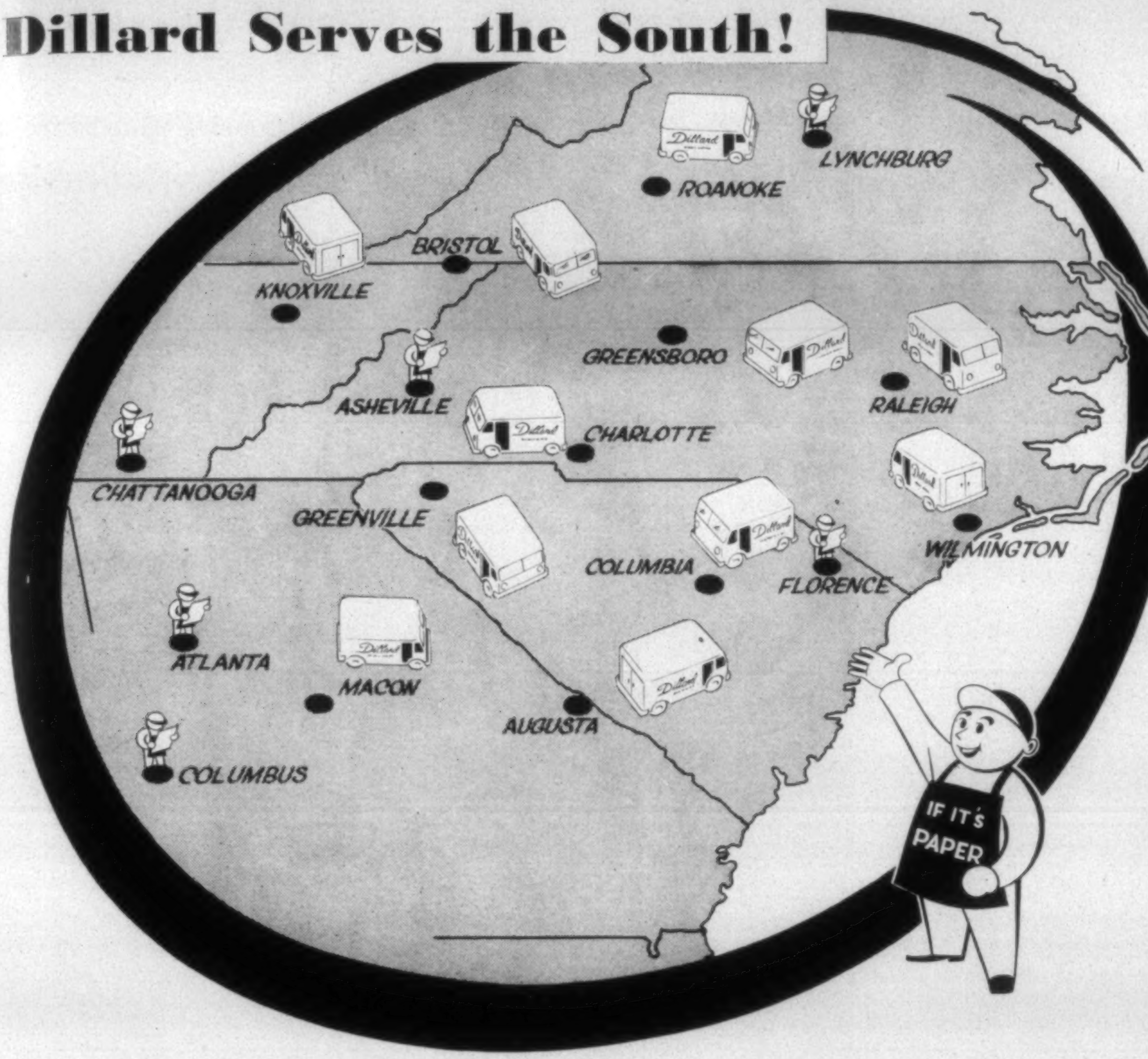
Many European areas getting this aid are in a better economic position than is the U. S., say some Senate and House members who made surveys last Fall. In addition, it is pointed out that almost every country is dragging its feet in its own behalf, and looking to the U. S. to shoulder full costs for raising new defenses for their own protection.

How to get U. S. citizens who are prisoners out of Communist hands has become the major problem facing the State Department. The Reds are exacting a terrific price; for the release of Oates in Hungary they want the gift of a complete steel mill. Other demands that have been outlined point to gifts of complete chemical and textile plants and oil refineries.

Signs are multiplying of an open break in wage negotiations, with a strike, in the coal industry on April 1. Lewis is not making headway in pushing through Congress a new "mine safety" law, which would give him an unbreakable grip on the industry. Coal supply above ground now will meet needs for four to six weeks.

Defeat of universal military training in the House will bring a sharp change in manpower plans for the Army. It is felt that from 6,000 to 8,000 reserve officers will brought nearer to being recalled to service, and the

Dillard Serves the South!



Here's a new map showing Dillard operations in the South. Divisions are indicated by trucks, while resident salesmen are indicated by the small figures. Dillard now has 11 complete divisions in leading Southern cities, plus resident salesmen in Atlanta and Columbus, Ga., Florence, S. C., Chattanooga, Tenn., Asheville, N. C., and Lynchburg, Va. Call Dillard . . . and satisfy all your paper needs at one convenient source of supply.

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1926 Dillard Paper Company Serves the South 1952

Navy will call up between 2,000 and 3,000 reserve officers before the year's end. The draft will soon start cutting much deeper.

The Administration's staggering defeat on U.M.T. was primarily a result of loudly vocal protests of parents made to House members. Belief was frequently expressed by parents to their House members that the bungling in Korea will require a huge army in the Orient for one or two decades. Many parents charged this was the Pentagon's hidden intent behind the bill.

Cease-fire negotiations in Korea have settled down to a stalemate in which the Reds make new and impossible demands, and U. S. officers promptly reject them. There's no indication that fighting and shooting may stop this year. The Army is not anxious to face the demand that U. S. troops in Korea be brought home and released as soon as shooting stops.

Top officials are holding their breath in fear that Communists may turn the Canal Zone into another Suez. Reds are actively boring into Central America, including Panama, with possibility of outbreaks similar to Egypt. Some well-known European Reds are fanning the flames of discontent in the isthmus.

Economy in next year's spending is fighting a losing battle in appropriation bills being brought into the House. Appropriations for the Treasury and Post Office departments went through with scarcely a change, although G.O.P. members pointed to waste and extravagance at every turn. Top majority leaders bat down every move to enforce cuts.

Influence peddlers are still as active in and around government as they have ever been, but they have become much more quiet in operating methods. Rumors are being heard that government millions continue to roll out in favored cases, deals are easy to make, and that insiders are still lined up at the feed trough.

Extending the price control law for another year will be a difficult undertaking, with organized business and agriculture fighting it all the way. However, the odds favor extension; it is a campaign year, and some Senate and House members feel that if an end of price controls was followed by another wave of inflation, it would backfire on them near the election. This is the sole reason for probable extension.

Steel unions will ultimately be given the 15-cent wage increase they are demanding, with about five cents for fringe benefits. This will make a total of about 20 cents. A rise in steel prices will be approved, but scarcely enough to offset the wage raise. The Administration will try to disguise the fact that higher prices are forced by higher wages.

Taft leaders say that, even if nominated, Eisenhower could not discuss either Truman or his scandals without first resigning from the Army. Military rules forbid generals talking about a President. Only by resigning, and giving up retirement benefits, they say, could Eisenhower attack either scandals, high taxes or waste in the Truman regime.

Some G.O.P. leaders say that even if Eisenhower retired, he could not make an effective fight on government corruption because much of it ties in with the Armed Services. Military law forbids a retired general from making contemptuous remarks about public officials. This would include in Eisenhower's case, they say, any official in the Truman regime charged with corruption.

The President has the power during an emergency to recall any Army officer to active duty at any time, as he has done with Marshall. Truman could do this with Eisenhower right in the middle of a campaign if he disliked what the general was saying. Even today, MacArthur is subject to such recall.

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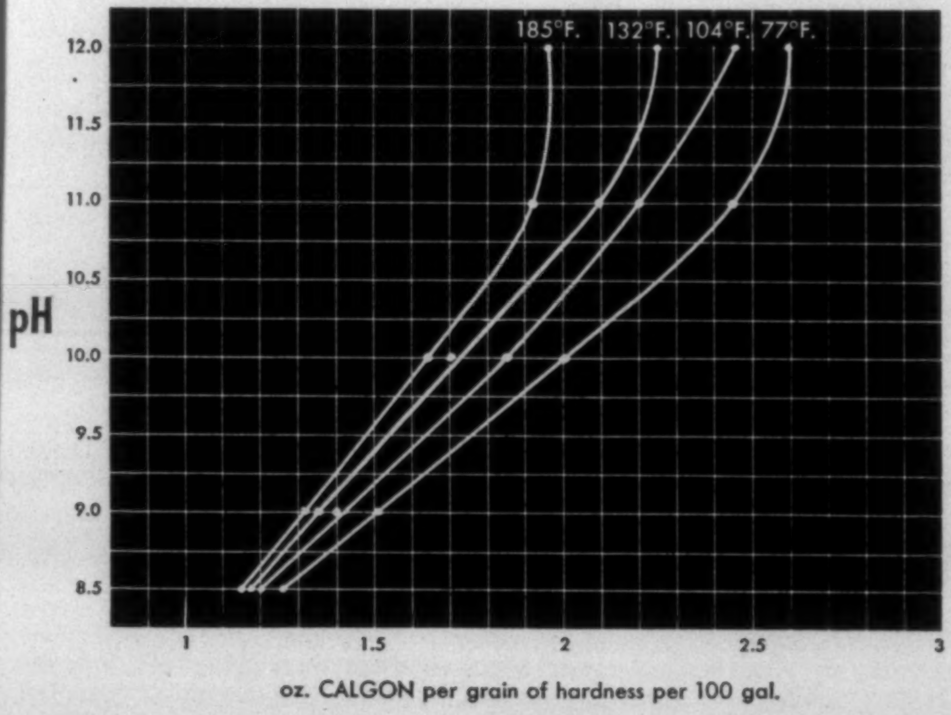

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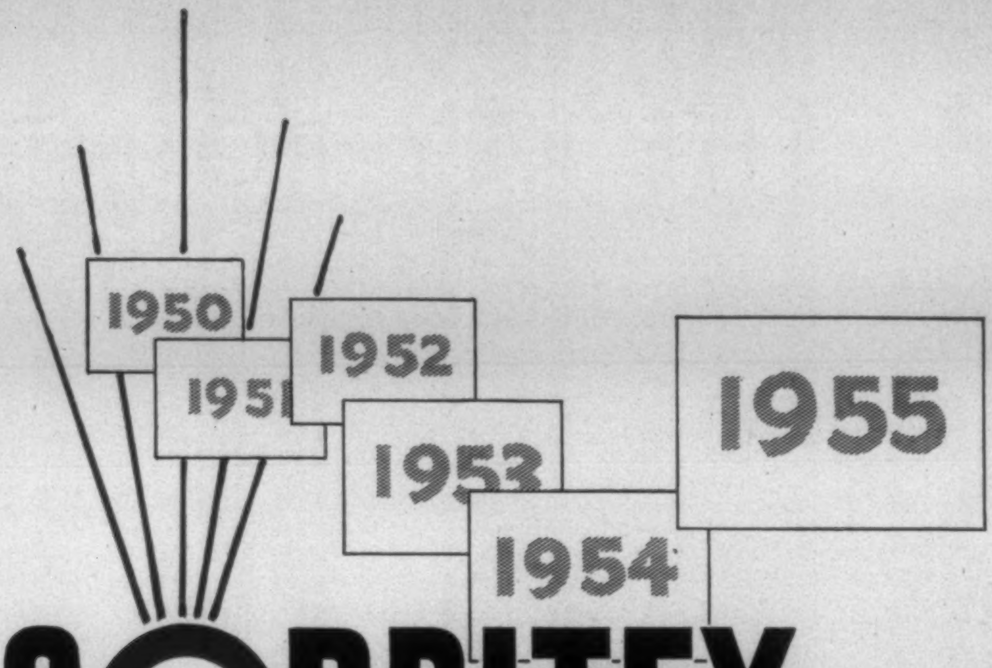

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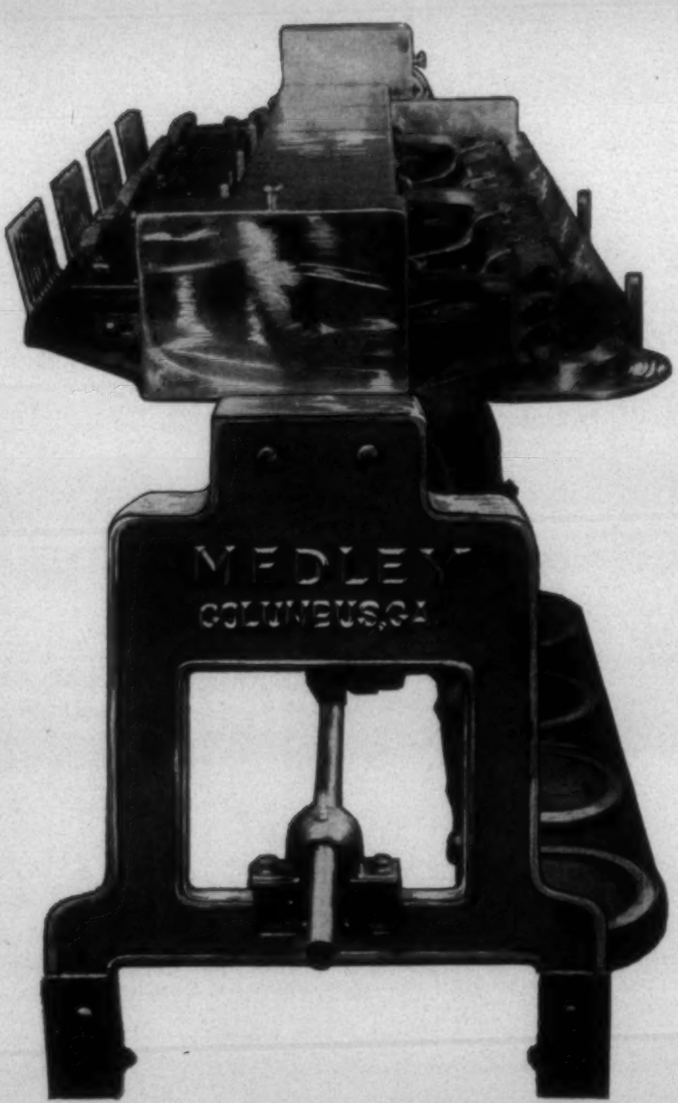

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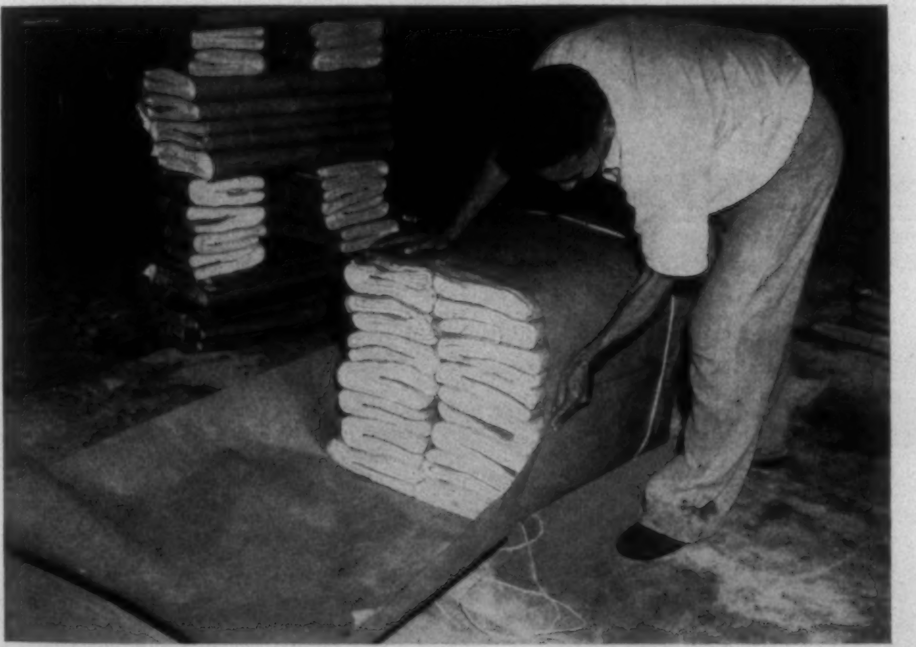

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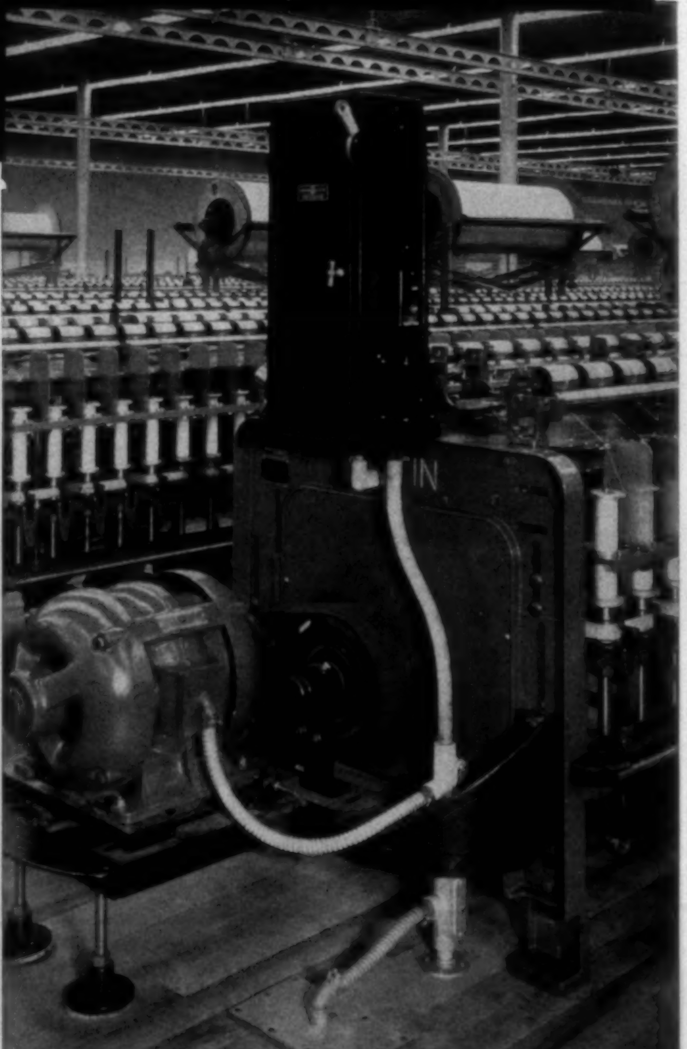

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textile bulletin

VOL. 78 MARCH, 1952 NO. 3

Union Carbide's DYNEL And Its Properties

UNION CARBIDE officials confirmed recently that they have applied for a certificate of necessity covering a dynel staple fiber plant with a capacity of 20 million pounds per year and costing over 30 million dollars. Howard S. Bunn, vice-president of Carbide & Carbon Chemicals Co., a division of Union Carbide & Carbon Corp., announced that the fiber plant will be built at Spray, N. C., if the necessity certificate is approved. Units for the production of raw materials to feed this plant will be built at Institute and South Charleston, W. Va.

Mr. Bunn stated that his company did not think it feasible to proceed with construction until the application for the necessity certificate had been approved, emphasizing that otherwise it might not be possible to obtain the materials of construction. He was hopeful, however, that approval would soon be forthcoming and stated that a dynel plant would be in the national interest because in event of war, large quantities of dynel will be required for important military uses.

Construction of the dynel plant will take approximately two years and will increase Union Carbide's annual production of acrylic type fibers to over 26,000,000 pounds. This will increase the nation's total projected capacity for all acrylic fibers to over 90,000,000 pounds per year and heralds a growth rate for this type of fibers exceeding the growth rates of viscose and acetate staple. Despite this rapid growth, Mr. Bunn expressed the opinion that the acrylic fibers would increase rather than reduce the civilian markets for wool. He pointed out that wool has certain unique advantages which none of the acrylics can duplicate and that blends of wool with an acrylic fiber are better than either alone for many purposes.

Mr. Bunn outlined the processes used for the production of the acrylic fibers and predicted that as a class they would become less costly than any other group of synthetics, with the exception of those derived from cellulose. He stressed that dynel would be the most economical of the acrylics and showed how Union Carbide could produce the raw materials for this fiber from coke and natural gas by any of several alternate chemical methods.

Mr. Bunn was the principal speaker at a press conference held recently, which was devoted to a review of dynel's progress to date and a forecast of new dynel fabrics and fashions soon to be marketed. He reported that Union Carbide's new fiber has created considerable consumer and trade interest and scored a number of sales successes in a diversified group of end products.

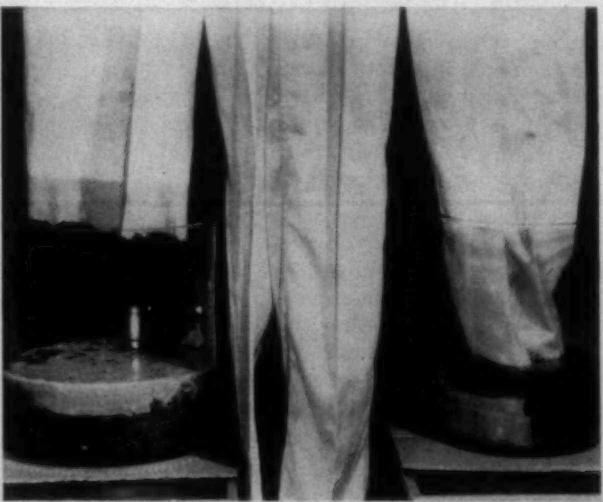
In its first full year of commercial production, he said, dynel has found an important use in pile fabrics. In deep-knit pile, alone or blended with vicara, dynel is now widely used in collars and trim for snowsuits and in covers for paint rollers that have had exceptional consumer success. A number of mills have developed deep pile fabrics, fleeces and friezes of dynel that will soon appear on the market.

Dynel provides excellent flame resistance and lasting resiliency in pile fabrics, Mr. Bunn said. Its soft, even texture is unaffected by rain or temperature as low as 60° below zero, Farenheit. A good range of light-fast colors has been developed.

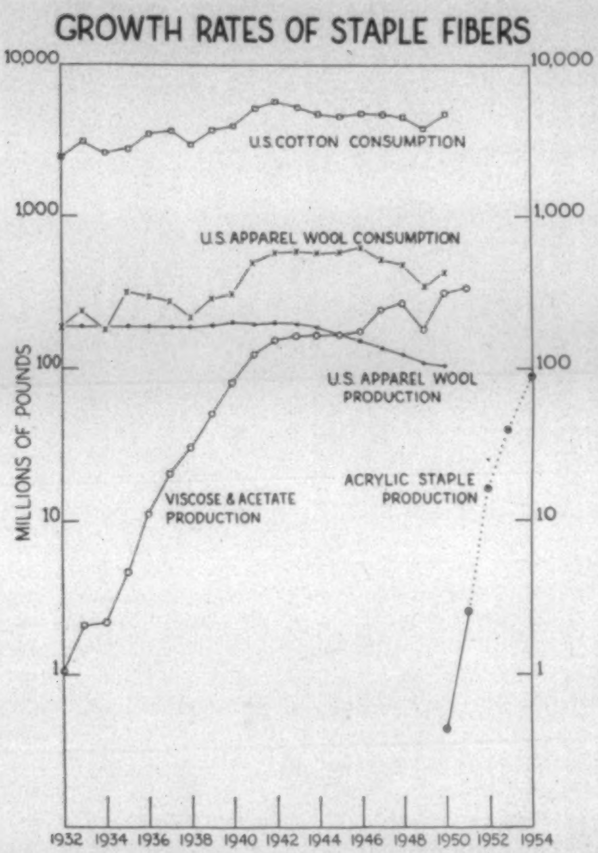
From its first introduction in the field about a year ago, dynel scored impressively as an important new fiber for blankets. Its properties combine to make superior blanket fabrics. Dynel blankets are washable, virtually shrink-proof, stain-resistant, quick-drying and fire-resistant. Luxuriously beautiful, they are warm with minimum weight. Because dynel is mothproof and mildewproof, they offer no storage problem. This, plus washability, provides an "easy-care" factor that is a strong influence on the consumer. In actual use, as well as in laboratory tests, dynel blankets appear to be among the longest-lasting ever made.

Executives of blanket mills have described the development of dynel as a major turning point in their industry. Mills now making all-dynel or dynel-wool blankets in full-size bed or crib sizes include Pepperell Mfg. Co., Fieldcrest Mills and North Star Woolen Mills Co. Also available are lightweight Summer blankets of both 100 per cent dynel and a dynel-wool blend.

Carl A. Setterstrom, sales manager of Carbide's textile fibers department, reported that wear tests carried out during the year indicate that a large volume of dynel's future use



Pair of trousers *(left)* in this demonstration was made of cotton fabric, while the other pair was cut from dynel fabric. One leg of each pair was immersed in a 60 per cent solution of sulfuric acid. According to Union Carbide, one leg of the cotton trousers was eaten away by the acid within eight seconds, while the leg of the dynel trousers was unaffected by the same solution.



will be blended fabrics for suitings. In blends for such apparel purposes, dynel provides superior looks and hand, excellent wrinkle resistance, strength, increased wear and ease of care, Mr. Setterstrom said.

He cited two blends now available. Robbins Mills has a blend of dynel with acetate and rayon, which will soon make its bow in suits for young men and boys by Levinsohn Bros. The suits are warm without bulk, richly textured, with a soft, tweedy appearance. They retain shape and crease resistance, are smartly styled, attractively colored—and reasonably priced.

A blend of dynel with cotton and nylon by Bates Mfg. Co. had sellout success last Fall in separates by Toni Owen. The fabric, appropriate for suitings and sportswear, is completely washable, non-shrinking, wrinkle-resistant and long-wearing. It has a luxurious, worsted "hand."

"Our experience to date," Mr. Setterstrom said, "shows that dynel blended fabrics are competitive in looks and hand with traditional fabrics. In addition, they are superior in washability, wrinkle-resistance and shape retention in wet weather, and wearing qualities. The fiber's versatility permits construction for coolness in hot weather or warmth in Winter. Dynel's easy care appeal has proved particularly effective at the consumer level."

The dynel sales manager reported that a number of dynel draperies have performed exceptionally well. Beautiful in appearance, they have a soft, pleasant touch, superior draping qualities. They are washable, don't shrink, stretch or sag, he said.

In addition, dynel's resistance to fire—it will burn only while a flame is directly applied to it, will not support combustion—is a vital safeguard. Several types of dynel draperies have been approved by the New York City Board of Standards and Appeals as meeting fire-resistive requirements for use in places of public assembly. Dynel drapes for the home should be available in the near future.

"Dynel, in a full year of wide commercial use," Mr. Bunn said, "has performed well in a varied range of products. Union Carbide's sales development program is on schedule. Results to date have confirmed our views with regard to dynel's potential as a major textile fiber."

The selection of a plant site at the North Carolina location was made after a study of many possible sites. It marks the return of the company to a place important to its origin, it was stated. The original Union Carbide Co. was formed as a result of the discovery, in an early electric furnace at Spray almost 60 years ago, of a method of producing calcium carbide, which yields acetylene in the presence of water. Acetylene is now one of the basic raw materials for the manufacture of many of the company's organic chemicals and plastics, to which the new dynel fiber is related.

Sixty-two years ago Maj. James T. Morehead of Spray sought a new enterprise to use the excess of electric power generated at his cotton mill there. With one of the inventors he brought to Spray, he formed the Willson Aluminum Co. Their first attempts to make aluminum were failures, but as work proceeded, three important scientific "firsts" were established. Theirs was the first commercial electric arc furnace, an achievement that raised by 2,000° F. the highest temperatures then obtainable. Second was the discovery of a method of producing calcium carbide, which with water yields acetylene gas. Third was the development of techniques to make alloys and ferro-alloys of metals such as chromium, manganese, silicon, tungsten and others—the beginnings of the present-day industries of ferro-alloys, alloy steels and stainless steels.

The acetylene development is now shrouded in legend, but the known facts are that a trial run was made in the furnace to reduce lime with tar, with the hope that this would be a way to make calicum metal. When the furnace was cooled, however, no metal was to be found. Instead, there remained a hot, gray stone-like material. When it

Every covering, save the sheets and pillow slips, shown on this bed, has a chemical origin. Pillows, blankets, bedspread and comforter all make use of dynel, Union Carbide's new textile fiber. Pillows and comforter have a dynel filling. Blankets are all-dynel, bedspread is dynel-nylon-cotton blend.

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was quenched in water to cool it, bubbles of a gas were given off. Eventual analyses proved the strange stone to be calcium carbide and the gas, acetylene. From those early origins grew the acetylene lamp era, then the metal working processes that use the oxy-acetylene flame, the hottest sustained flame known to man. These and other chemical developments later led to the formation of Union Carbide & Carbon Corp., and still later Carbide & Carbon Chemical Co.

The latter company now produces over 300 chemicals from acetylene and its gaseous cousin ethylene, including new plastics such as polyethylene and "Vinylite" plastics. One of the most recent developments is dynel fiber.

Blends of dynel, new acrylic textile fiber, with other man-made fibers, make possible all-synthetic suitings and outerwear for year-round use, Mr. Setterstrom told the press conference.

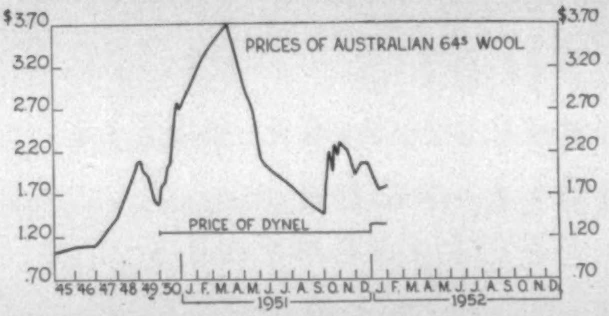
"Blended fabrics are greatly improved by dynel," Mr. Setterstrom said. "They have the appearance and feel of fine traditional fabrics, plus new practical features such as washability, wrinkle resistance and increased durability.

"Blended with acetate and rayon," Mr. Setterstrom said, "dynel improves the hand and increases strength, abrasion resistance, loft, wrinkle resistance and retention of creases, even when wet. These blended fabrics can be made warm or cool to fit the season. They can be made completely washable, with no shrinking or stretching. They are, of course, unharmed by dry cleaning solvents."

Blends of dynel with rayon and acetate include a lightweight flannel by Cohn-Hall-Marx and a gabardine by Fox-Wells. A rayon-dynel plaid dress-weight fabric by U. S. Royal will also be on the market for Fall.

Dynel blends well with the natural fibers as well as with the synthetics, Mr. Setterstrom emphasized, calling attention to a Marine Corps uniform kersey containing 15 per cent dynel, and to a series of Army, Navy, and Air Force fabrics containing up to 50 per cent dynel and now under field test. These fabrics are up-graded in strength, wearing qualities and resistance to wrinkling, with no change in traditional appearance.

Shown at the press conference were men's sport shirts of two dynel-wool blends. One from a 50-50 dynel-wool blend by North Star Woolen Mills was made by Bloch-Heller. It will be offered in a variety of light colors, is soft, warm and completely washable. The other from a 15 per cent dynel blend was made up by Masland. A 30 per cent dynel blend in a whipcord by Metcalf Bros. was shown in uniforms for bus drivers, elevator operators and others requiring tough, easy-care garments.



Dynel-wool blends generally, Mr. Setterstrom said, have the highly regarded advantages of all-wool constructions, with the addition of washability, shrink resistance and shape retention during washing. A dynel-wool Summer blanket by North Star, he reported, has proved to be one of the strongest, warmest, lightweight blankets ever made. "Dynel and other new man-made fibers mean new business, not competition, for the natural fibers," he said. "Properly applied in blends they help to correct the deficiencies of the natural fibers, stretch scarce supplies in shortage periods, and provide a price stability not possible with the natural fibers."

Dynel blends for uses other than suitings have already met commercial success, Mr. Setterstrom said. One of these, a dynel-"Vicara" pile fabric by Borg, is widely used in collars and trim for storm coats and jackets and children's snow suits. A dynel-wool dust fume bag, which filters hot acid particles from chimney discharges, has had exceptional industrial success. Housewives have received with enthusiasm a dynel-cotton dishcloth, which is unusually soft, yet strong and long-wearing.

"On the basis of our experience to date," Mr. Setterstrom said, "we feel that much of dynel's future lies in blended fabrics, principally for suitings."

Sources of dynel products, now being offered commercially, follow: Woven apparel blends—Bates Fabrics, Inc., New York, Fox-Wells Co., New York, Robbins Mills, Inc., New York; baby blankets—Pepperell Mfg. Co., Boston, Mass.; Summer blankets—North Star Woolen Mill Co., New York, Pepperell Mfg. Co., Boston; bed blankets—Fieldcrest Mills, New York, Pepperell Mfg. Co., Boston.

Spinning And Weaving American Cyanamid's X-51 Acrylic Fiber

By C. W. BENDIGO

IT IS our belief that the greatest future for all the acrylic staples is on cotton-type machinery. In this class of machinery we include spun rayon and American worsted as well as some systems that begin with tow. We believe that the greatest potential for acrylic fibers is on cotton-type equipment principally because the acrylics permit cotton and spun-rayon mills to produce warmth-type fabrics superior to any that they have been able to achieve heretofore.

X-51 acrylic filament yarn has been thrown and woven or knit on conventional equipment by using the same procedures employed with any other continuous-filament synthetics. The weaver and knitter should especially bear in

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City______________ Zone____ State________ mind, however, that X-51 yarns have a larger diameter for any denier than is found in rayon or acetate. The three X-51 yarns we have produced, 150/90, 100/60, and 75/45, have—for acyrylics—a high number of filaments. The finer filaments are responsible for much of the pleasant feel of fabrics woven or knit from X-51. This feel should make X-51 filament desirable for many types of undergarments. Despite the higher number of filaments, brushed fabrics have a surprisingly resilient surface, thanks to the unique physical properties of X-51 acrylic fiber. Filament yarn knits well, with good stretch formation, on both warp-knitting and filling-knitting machines if the needles are not overcrowded.

One caution necessary with X-51 filament weaving yarns is to be sure that when warps are sized the size is compatible with the anti-static finish on the yarn. In slashing, caution should also be taken so as not to overdry warps. Bear in mind that the fiber drys very quickly. Cylinder temperatures should be kept low.

X-51 staple has been processed on cotton, woolen, and worsted equipment with a minimum of modifications and difficulties. Mills that have also handled other synthetics, especially hydrophobic types, have reported that X-51 processes more easily than any other synthetics. Such gratifying statements are surprising when applied to a new fiber. One of our objectives has been to develop a type of fiber that would give a minimum of trouble in all textile operations in addition to producing superior types of fabrics. We have evidence that we are succeeding.

I shall quickly run through the various operations in spinning yarn on cotton-type equipment to point out the more significant things we have found to date. Much that I have to say about running X-51 on cotton-type equipment can be applied to processing X-51 staple on woolen and worsted equipment. In general, the information I will give you applies to three-denier staple. Procedure for our 1.5-denier is only slightly different.

Relative humidity in the plant is not extremely critical, but it should be above 40 or 45 per cent. Fiber should have a brief opportunity to condition, especially if it has been allowed to become quite cold, as often happens in the Winter.

As with all staple, we recommend good blending of bales. We use a lot number and lettering system to assist mills in utilizing bales in such a way as to get the best blending. Mild opening is needed, such as that obtained with a blending feeder. At this stage one will begin to notice the great bulk of X-51 acrylic fiber.

The bulkiness of X-51 may necessitate minor changes on pickers to keep them from choking. Twelve-ounce laps, rather than 14 are recommended, again because of the bulk of X-51. Should laps split, this problem can be solved, as is often done with other staples, by running three or four ends of roving into the lap as it is made.

Flat-top cards have satisfactorily handled three-denier staple in lengths of 1½, two, and 2½ inches and 1.5-denier in lengths of 1½ and two inches. A fancy roll is needed for 1.5-denier and recommended for three-denier. The same fancy roll that is commonly used for nylon staple is satisfactory. If the card is running correctly, it should produce up to nine pounds per hour on 1.5-denier and at least that much or more on three-denier. Waste should be about two per cent, and very long runs can be made between strippings. We have fuller details for anyone who needs them. Nothing special need be said about drawing or roving except to use a somewhat low twist multiple in roving, say about 1.08.

In spinning, no unusual care need be taken, but bear in mind the bulky nature of X-51. This bulk and other special physical properties mean that lower than normal twists should be used. (Need I point out that lower twists mean higher frame production?) For three-denier stock, yarn strength starts to shoot up at a twist multiple of two and beyond (around 10 t.p.i. for 20s). Maximum strength for 20s yarn is with a twist multiple of around three; with 30s it is around 3.3. Spin limit with 1½-inch is 30s and with two or 2½-inch slightly above. Spin limits for 1.5-denier have not been determined fully. Initial work has shown that 60s are easy to produce with 1½-inch staple and 80s have been spun. Tests with two-inch are now being run.

With X-51 you can expect very even yarn. Peaks on the Uster evenness tester have strayed below 50 but nearer 70 is more normal. That compares to 90 to 100 for cotton.

Yarn from X-51 can be twist set, but heat should not exceed 160° F. dry bulb and 150° F. wet bulb nor should time exceed one hour.

Ply yarns, of course, can be woven without slashing. Singles can be sized very successfully in a size solution containing about a pound per gallon of a modified starch. Other ingredients should be about one-third of a pound per gallon of synthetic size and small amounts of gum and softener. Temperatures should be kept low: X-51 drys very quickly, and over-baking can be just as troublesome with X-51 as with other fibers. It is best to err on the side of underdrying provided, of course, that the warps are not downright wet. Bear in mind that X-51 is virtually as strong wet or dry. It is relatively unaffected by water.

In weaving acrylic yarns, almost everyone has a tendency to overconstruct, to try to put in too many ends and picks. We have some evidence that X-51 appears to have a tendency to full. (We are currently investigating this phenomena.) Both of these additional factors must be considered in designing fabrics from X-51 spun yarn. An overconstructed fabric made from overtwisted yarn works against the natural advantages offered by X-51 and other acrylic fibers. Fortunately, quite a few textile technologists have learned how to use acrylic fibers, but even some of these are surprised when they run into the slightly greater bulkiness of X-51.

Weavers aren't the only ones to overconstruct when using X-51 or even other acrylic types. In addition to bulkiness, X-51, as mentioned earlier, seems to full a little. When both these properties are taken into account and the spun yarn is not overtwisted, knit fabrics with an excellently full, warm, pleasant hand are produced.

What I have had to say in the foregoing has to do with X-51 used in 100 per cent form. We have not progressed far enough to report on our work with blends except to say that best results will probably come from blends with hydrophilic fibers: rayon, wool, cotton, azlon. For some uses, we can see advantages in a three-fiber blend that would include nylon. For the present, at least, we recommend against blends with acetate or with other hydrophobic fibers.

In products knitted from X-51 yarns there is the whole range of bulky, warmth fabrics. Such fabrics can have warmth with a minimum of weight and will have a pleasant feel. With a 1.5-denier exceedingly strong light fabrics can be made or bulkier cashmere types. Properly constructed, X-51 fabrics should have excellent dimensional stability, especially to washing. They can be expected to be resistant to attack by moths, to retain pleats or creases where desired, and to wear well.

In woven products, also, there is the whole range of bulky warmth fabrics starting with napped blankets, through pile types, to men's and women's outerwear. There can be a wide variety of industrial fabrics, especially those requiring superior acid resistance and good alkali resistance or resistance to degradation by weathering or micro-organisms.

It is not generally recognized that with the "principally acrylic" fibers the textile mill can get a greater yield of fabric per pound of staple used. This benefit is often masked by the tendency to specify the weight per yard of a fabric. We must constantly point out that comparing certain weight acrylic-fiber fabric with a fabric from another fiber is similar to saying a grapefruit is the size of an orange. It is also not too well recognized that with acrylic fibers, and especially with X-51, very light weight fabrics of the "bulky" type are easily achieved. The trend in this nation of centrally heated homes and heated cars is toward lighter and lighter weight fabrics. X-51, we feel, is right in step with this trend—maybe ahead of it, but only for the moment.

Mr. Bendigo's paper was delivered before the March 5 meeting of the American Association of Textile Technologists in New York City, and also before the March 8 meeting of the Eastern Carolina Division, Southern Textile Association, at Raleigh, N. C.

Establishing Sound Base Rates Of Pay With Job Evaluation

By THOMAS N. INGRAM

QUALITY products at competitive costs and good personnel relations seem to be the objectives of every business, large or small. Such objectives are reached through the intelligent direction of men rather than the direction of things. The springboard to competitive costs is anchored to controlled labor costs and is found to be a much more prolific source of cost reduction than the machinery and material factors in production.

It is in the area of controlled labor costs that fair but analytical and thoughtful concentration can produce certain positive results for a plant. Reduction in unit costs can be made through careful application of methods engineering techniques, use of wage incentives, and through sound wage administration. Sound wage administration is the subject that we consider here.

How often does an employee voice silently or openly the question as to why his pay rate is different from his neighbor's when he works just as hard or harder than his neighbor? And how many dollars per year does it cost a plant to pay rates that are unsound?

Consider as an example the experience of a small cotton mill which set out to establish a sound wage structure. This decision was reached after finding that the management's policy of "paying rates equal to or better than our competitors" existed only in imagination. A careful analysis of their wage administration procedure had revealed some surprising facts. Menial jobs in the plant were being paid as much as 15 cents per hour more than the average paid for similar work in the area, and the highest skilled jobs in the plant were being compensated at rates which were as much as 20 cents per hour under the area average for jobs requiring similar skills. No base rates existed in the plant. Hourly-paid employees were paid at fixed rates and incentive workers were paid at piece rates. An examination of the earnings history for the plant reflected that average hourly earnings for piece work rated employees had gone beyond what they should. It had been the plant practice to establish piece rates by dividing an expected production figure into "what this type of operator should earn per hour." Thus, in the absence of sound base rates and sound "job loads," earnings had advanced beyond anticipation, and unit costs had accompanied them. It was also found that there existed a spread of only 15 cents per hour from the lowest paid to the highest paid jobs in the plant.

Management was faced with resolving the question of how to arrive at fair base rates for all their jobs; whether to use rates paid by competitors without knowing, in many instances, the equipment, speeds, production expectancies, methods used, raw materials and other factors peculiar to competing plants or whether to use arbitrary base rates. Obviously, prudent management would not be interested in letting another management call the tune, nor would it consider "pulling rates out of the atmosphere." Being unable to find a point of departure in either instance that seemed to indicate soundness and accuracy, it was decided to use a job evaluation plan.

For those in the company unfamiliar with job evaluation, it was defined as a method of systematized reasoning for the appraisal of those things which cause differences in wage rates for individual workers, jobs and localities. It was explained that certain factors such as skill, effort, responsibility and working conditions are common to every job, but that the difference in the degree of difficulty in each factor of a job determines its relative worth to other jobs measured by the same yardstick.

Next phase of the program was to form a job evaluation committee composed of plant executive and supervisory personnel who were familiar with all of the plant jobs. The committee's first function was to build a non-supervisory job evaluation plan to fit the needs of this particular plant. Committee members began by sub-dividing the aforementioned four factors into 11 individual factors which were deemed best expressive of their plant jobs. The first of these factors which were decided upon were the components of *skill:* education or equivalent, judgment, initiative or ingenuity, experience or learning time. *Effort* was subdivided into physical effort and visual effort. *Responsibility* was broken down into three factors—responsibility for materials and products, responsibility for tools and equipment, responsibility for work of others. The *working conditions* factor was subdivided into two phases—job conditions and unavoidable hazards.

Each of these factors was given clear definition, and a value in points in proportion to its importance to the job. Various degrees of difficulty were determined for each factor as illustrated below:

Experience-learning time. This factor appraises the length of time required, normally, to enable an average individual to perform a job satisfactorily, assuming that the educational equivalent has been met.

Degree	Definition	Point Value
1	Under one month	25
2	One to three months	50
3	Three to six months	75
4	Six to 12 months	100
5	One to two years	125
6	Two to four years	150
7	Over four years	175

Job Analysis

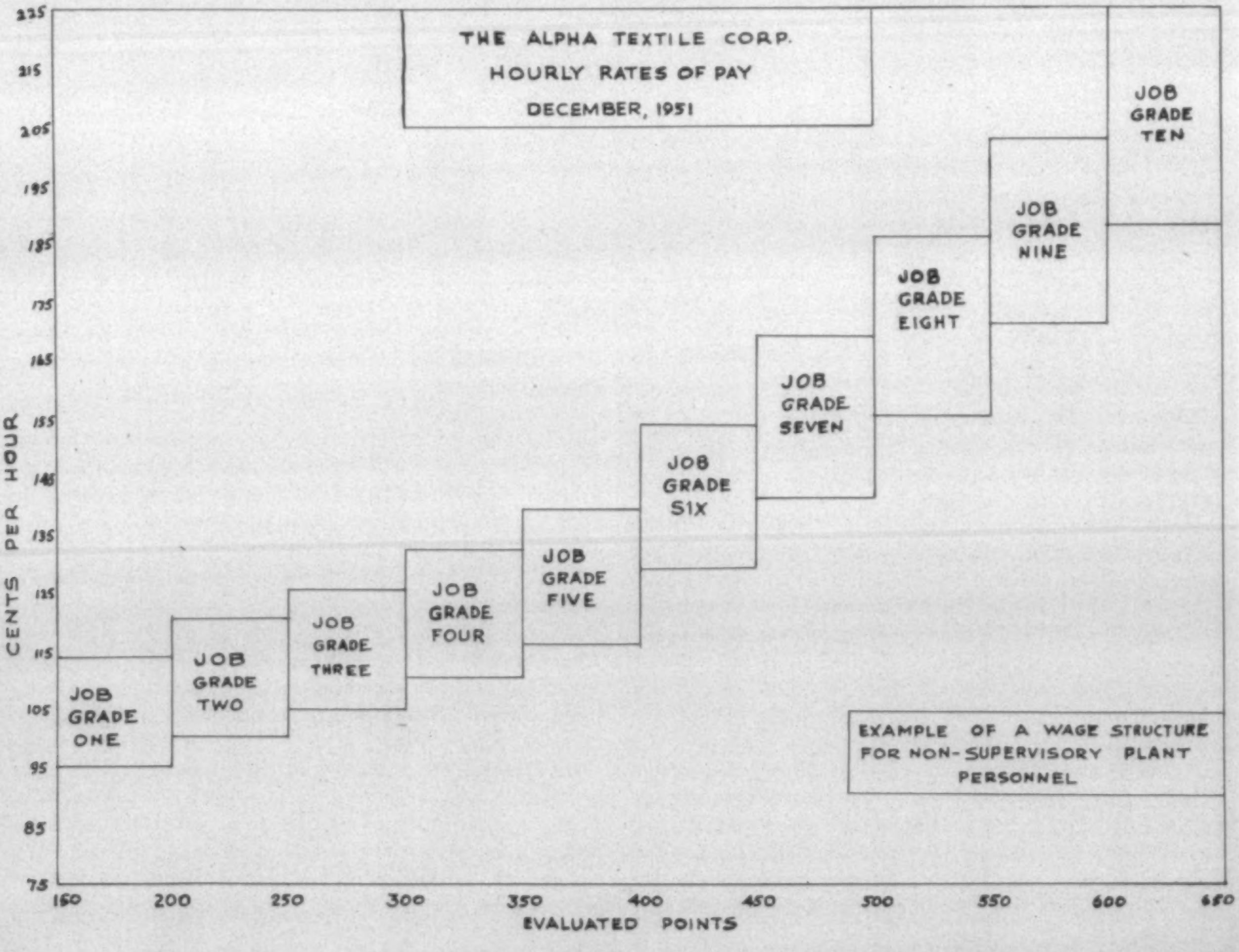
The evaluation committee began to analyze its jobs according to a predetermined pattern which had a threefold objective: to completely and accurately identify each representative job, to completely and accurately describe in writing the tasks of the job, and to indicate clearly the requirements that the job makes upon the employee for successful performance. To obtain these objectives, it was planned to obtain and report the following information:

1. *What* the employees does
2. *How* he does it
3. *Why* he does it
4. *Skill* involved in doing it

Job analysts recorded the routine and regular duties, plus the irregular duties of each job; how job duties were done; purposes of the job; materials, tools, equipment, used; machines operated; physical and visual demands of the job; and the working conditions and safety hazards. Job descriptions were written to outline the complete job requirements, and at this point one of the by-products of job analysis and evaluation was realized. Plant management found to its surprise that practically all of its indirect or service labor jobs were underassigned by from 25 to 50 per cent, that they were paying for and losing about 200 man hours per week. It became expedient to plan a fair distribution of the time work load among less employees. The planning was begun, but it was the decision of management in this instance to displace as few persons as practicable at once and to let normal labor turnover without rehiring answer this problem.

The Evaluation Process

Once all jobs had been analyzed, described, and simplified where practicable, the committee began to examine each job in terms of the factors, deciding which degree of diffi-



†Illustration based on photomicrograph of wool fiber (x 500).

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culty best fit the job under consideration. All jobs having been applied through this procedure, each job was compared with other key jobs on a factor by factor basis. In this manner, all jobs within the mill were measured by the same scale and their relative worth determined. This worth was expressed in points.

Rather than to have each job carry a different rate of pay, ten job grades were established, and all jobs were grouped according to their point values into grades. For example, all jobs having a value of from 125 to 150 points were placed in Job Grade 1. All jobs having point values ranging from 151 to 175 points were placed in Job Grade 2, etc. Rates of pay would be set by job grades and all jobs falling within a certain grade would be entitled to the pay scales set for that grade.

Conversion to Money Values

The evaluation committee had made a wage survey in the area and in competing plants to determine the prevailing rates for key jobs. These rates and the present plant rates for similar jobs were plotted on graph paper to determine the pattern and to reflect discrepancies graphically.

In this manner little difficulty was experienced in arriving at a sound and equitable wage curve for the plant. Minimum and maximum rates were established for each labor grade, and the midpoints of each grade were used as base rates for computing incentive pay. An example of how the grades can be set up by money amounts follows:

Job Grade	Minimum Rate	Base Rate	Maximum Rate
1	.95	1.02	1.09
2	1.00	1.08	1.15
3	1.05	1.13	1.21
4	1.10	1.18	1.27
5	1.16	1.25	1.34

What Was Done With the Evaluation

A schedule was compiled for each job classification to show the present rates compared with evaluated minimums and maximums. It was found that in six labor grades a total of 50 employees would have to be raised an average of four cents per hour to bring them to the evaluated minimum or the evaluated base rate in the instance of incentive pay employees; 125 employees in three job grades were being paid an average of five cents per hour beyond the maximum of their job grades; and 47 employees in five job grades were being compensated at rates within the newly evaluated ranges.

With the presence of sound base rates, piece work rates could be changed as methods or style changes warranted by returning always to the same base rate. In this manner if the job load is calculated or determined accurately, average hourly earnings would be expected to remain constant. Incentive was provided the hourly paid employees in having a minimum and a maximum range through which they could be moved as merit justified it.

The company was willing to raise the 50 employees at a cost of only $2 per hour. But it was likewise eager to work out the means of getting the $6.25 per hour it was overpaying into line. The net gain to the company was figured at $8,500 per year—a nice sum to a small plant.

At the completion of this work the firm felt that it had established a sound rate structure and that it was equipped with factual data to show what factors distinguished one job from another. It had passed a big hurdle in becoming "cost competitive."

Use of Evaluation Growing

In the early 1940s job evaluation took on increased importance as the basis for wage programs. The National War Labor Board's approval of job evaluation methods encouraged organizations to establish such methods as a yardstick or measuring device for determining comparative base rates. Within a few months after the publication of Order No. 31, the regional offices were in some cases deluged with newly-established job evaluation programs. Thus, job evaluation became a sharp implement in the kit of management tools. Those companies which have evaluation plans in effect seem to fare far better than those without under today's wage and salary stabilization regulations.

No informed person believes, however, that job evaluation will eliminate completely the strife and conflict caused by basic wage demands. But companies whose pay structure is based upon sound job evaluation procedures have the facts and methods for dealing fairly with the numerous pay grievances which arise. Thus, strife and conflict is reduced, and the man on the job begins to know where he stands as it relates to his pocketbook.

Mr. Ingram, as noted in the "Personal News" section of this issue, recently joined the staff of the American Cotton Manufacturers Institute at Charlotte, N. C. He prepared the foregoing article while still a senior associate of Bruce Payne & Associates, Inc., management consulting firm of Westport, Conn., and Atlanta, Ga.

H & B Sold; Quits Textile Machinery Field

Stockholders of H & B American Machine Co. at a meeting March 4 voted to discontinue its textile machinery manufacturing operations and to dispose of its assets. The stockholders also approved a purchase agreement for the properties entered into Feb. 29 by the management and Brownell Industries, Inc., and Joseph D. Flynn, Jr., both of Providence, R. I.

William A. Sipprell, Jr., H & B president, told the stockholders that "the action you are taking at this meeting does not—does not I emphasize—mean that we are going out of business. The new interests that are coming into the company have already agreed to make certain financial contributions and are very confident that they can rehabilitate our affairs with other products."

Melville F. Weston, a director and former president of H & B, told the stockholders: "I can assure the minority stockholders, of which I am one, that the new interests in this company, John J. Bergen and Irving M. Felt (top executives of Graham-Paige Corp.) have made a success out of other enterpises as down at the heels as this textile machinery manufacturer, and I am confident they will do the same thing with this company."

Adequate arrangements have been made for the service and repair of all textile machinery now in mills that was manufactured by H & B American Machine Co., it was announced by William A. Jennings of the law firm of Simpson, Thatcher & Bartlett, who is a counselor for Mr. Bergen and Mr. Felt. Mr. Jennings did not disclose the name of the firm which would continue the service and repair parts business, but stated that it was a reputable organization and that the customers would be happy.

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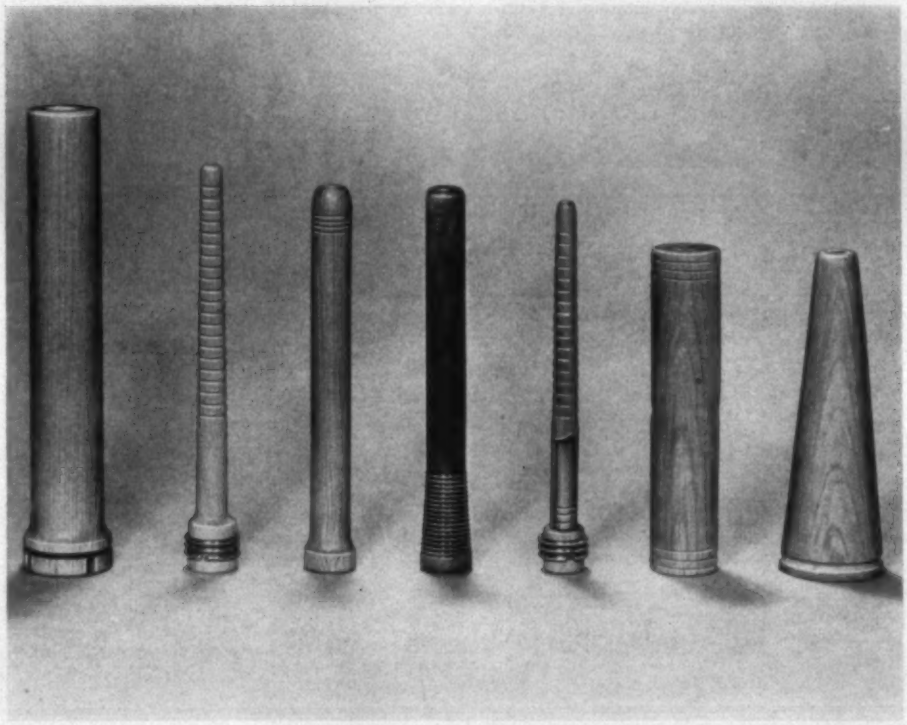

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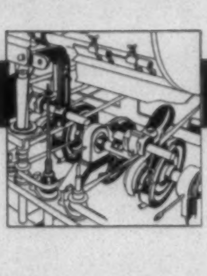

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THE MILL OF TODAY

By ROBERT Z. WALKER

Part 30 – The Economics of Spinning

THE mill makes or loses its profits in the spinning room. Spinning is an expensive operation in all respects—investment, labor, and in the comparatively low production per hour per spindle. The important factor, the cause of real concern to progressive mill management, lies in the low production per spindle per hour of a spinning frame. Because of this low production per spindle any slight increase, and it may appear negligible when calculated for a single spindle, will assume very significant proportions when multiplied by the total number of spindles in the room and on a weekly basis. Any slight increase, or any such improvement resulting in either more production or lowered operating costs per spindle, may allow the mill to remain competitive or to gain a price advantage over its competitors. The vital need of remaining competitive for continued existence has spurred research and practical mill survey groups into an ever-intensified examination of potential means of either decreasing spinning costs or increasing spinning production. The two objectives have as a common goal the decrease in the cost per pound of yarn as it is doffed from the spinning frame.

The successful mill never forgets its main objective in striving for lowered costs, namely, to spin yarn of the highest possible quality. One of the major pitfalls which can be disastrous to a mill is to forget that quality is paramount and to think only of means which will result in reduced direct costs per pound of yarn spun. There are numerous way to reduce spinning and preparatory costs, but some of them will be reflected in a lowering of yarn quality, in either appearance or strength. For instance, the quality and staple length of part of the stock may be reduced so that a cheaper blend will be used, or a process of drawing will be discarded to cut preparatory costs. Another means is to speed up machines to gain more production as in the case of speeding up the doffer of the card or the drafting rolls of the draw frame. All of the methods will reduce operating costs, at least on paper, but they will often cause a reduction in quality.

The mill should be primarily concerned with quality because, in the final analysis, the yarn must be sold, and will continue to be bought only when the purchaser is satisfied with quality. This, of course, is obvious, but nevertheless, is sometimes disregarded. However, the spinning of quality yarn is itself the best means towards achieving low-cost operations.

Before it is possible to make any decisive moves towards reducing costs, either directly in the spinning room or indirectly in either the preparatory or successive processes because of changed practices in the spinning room, it is necessary to understand fully all of the complicated and interwoven factors which make up such costs. Particularly, when a large sum of money is used in making a capital investment for the purchase of new spinning frames, final specifications of the frames should not be drawn up and approved until all of the cost factors have been evaluated and analyzed. The frames should be of the gauge, ring size, and started on the spindle speed which will offer the most favorable compromise in spinning the yarn counts of the particular mill. Something to be remembered, in spinning as in the rest of the mill, is that there is no such thing as the "best." Everything—speeds, drafts, ring sizes, all are compromises in trying to arrive at optimum operating conditions most suitable for opposing forces.

What are the cost factors which must be considered as stemming from the operation of the spinning room? First, there are the preparatory processes, and particularly roving, which determine both the quality of the stock creeled into the spinning frame and the size of the package which will be in the creel. Secondly, there are actual spinning costs based upon the ability of the spinning frames to take full advantage of low-cost operation. Thirdly, subsequent processes such as winding and weaving are directly affected by the strength of the yarn and the size of the spinning package.

It is not necessary to elaborate upon the obvious cost factors in the form of using adequate preparatory processes, or operating equipment at speeds consistent with the stock and type of yarn to be produced. Direct costs will decrease in proportion to the production rate of any machine; therefore, increased machine speeds will, within reason, cause a reduction in the cost per pound of stock processed in the preparatory stages. By this is meant that such practices as speeding up card production or drawing frame drafting rolls will result in more pounds per hour per delivery for the same cost factors of labor, floor space utilized, and machine investment. Whether such increased machine loads will result in a similar decrease in cost when calculated upon the over-all effects on machine efficiency, yarn and cloth quality, and waste savings throughout the mill, is questionable. If the higher productions have been achieved at the expense of quality or strength of the yarn, then probably the savings at the particular process will be more than overbalanced by losses in efficiency in the remaining stages of yarn and fabric manufacture caused by more frequent machine stoppages due to end breakage.

The same thing holds true when certain preparatory processes are eliminated to save costs. For instance, there have been mills which have taken out a process of drawing, perhaps using one process where formerly two processes were used. When the process of drawing is by-passed the fibers will not be arranged as parallel in the sliver taken to the roving frames, nor will the sliver still have the same low evenness variation. The result is that the roving will not be as even because the poorly arranged fibers will not draft out as evenly, and because the uneven sliver will not make as even roving. Uneven roving, in turn, will lead to uneven yarn which, by nature, will be weaker and will cause more ends down in spinning, breaks in winding, slashing, and in weaving. Breaks at these later processes are expensive when viewed in the light of time required to fix them and in the potential "seconds" which they cause. In evaluating the potential savings created by the elimination of a preparatory process, it should be borne in mind that preparatory processing is comparatively inexpensive as the fibers are still the form of laps or sliver, so that the production per machine delivery is high, and therefore, the direct labor is low on the basis of total poundage produced per man-hour.

What should be considered here are modern spinning and preparatory practices and equipment which may be used to advantage in increasing machine efficiencies and reducing the amount of labor required per pound of yarn produced—the two major factors in spinning and weaving costs. The third cost element is concerned with the physical requirements of the machinery itself, such as maintenance, power costs, and floor space required.

The type of drafting element used on the spinning frame is not so important in representing reductions in actual spinning costs; in fact, it offers little advantage there, as in the savings made possible at the roving frame. The worth of long draft spinning, disregarding the better fiber control which is obtained, lies in the savings which can be realized at the roving frame. Long draft spinning permits the use of drafts ranging from a 16 to 40 or over, depending upon the type of long draft system used, in contrast to the maximum draft of approximately 10, possible with conventional three-roll drafting. Long draft does not necessarily permit using higher spindle speeds or higher front roll speeds to raise spinning production which would lower spinning costs, however, the long draft allows the use of a coarser or heavier hank roving in the creel of the spinning frame.

The use of heavier hank roving will be beneficial in reducing costs in several respects. First, there is the cost of making the roving which will be creeled into the spinning frame. The cost of this roving will vary according to the weight and also according to whether or not the count and quality of yarn desired will make the use of single roving feasible. Generally speaking, the coarser the roving, the cheaper it will be to make. With the proper long draft equipment on the spinning frame, it is now often possible to use single roving of heavy weight where previously two ends of lighter hank roving were required.

Larger Package Roving

Coarse or heavy roving is cheaper to make because the heavier strand of lightly twisted fibers is stronger and therefore can be made on a larger roving frame, making a larger roving bobbin containing much more stock. Although there have been a few isolated cases where going to a larger frame, such as from an 8x4 frame to a 9x4½, did not prove more economical, generally, the larger package will be more inexpensive to produce from the standpoint of labor costs. Using single roving rather than double roving in the spinning creel gives a cost advantage because one bobbin is used per spinning spindle rather than two. Secondly, single roving on large packages does offer some advantages in the spinning room because the number of bobbins which must be handled is significantly reduced. The roving boys do not have to carry as many bobbins, and the spinner does not have as many bobbins to creel into the spinning frame. The gain here is offset somewhat because as many large heavy bobbins cannot be handled per hour by a person as can the smaller lighter ones.

Before considering means of reducing costs in the spinning room, it might be well to list the labor involved in its operation and maintenance. The room is managed by an overseer and second hand. Next, there are the roving boys who bring the roving bobbins into the room and who sometimes lay the bobbins up on the top of the creel of the spinning frames. Then, there are the spinners who creel in the bobbins, piece up broken ends, and tend to the general cleaning and operation of the frames. Doffing is the next main labor factor, followed by the maintenance crew consisting of the oiler, fixer, and tape man.

In the modern mill one of the greatest cost factors is the cost of labor. The labor cost is the cost per pound of yarn produced, and therefore, is the result of labor load assignments and machine and operative efficiency as expressed in the total of pounds per man-hour. Naturally, with the cost of labor per hour remaining equal, as more pounds are produced per hour per man, the lower will be the labor cost of a pound of yarn. While this is elementary logic, it should be employed in passing judgment on many phases of mill organization, and should be balanced against such cost factors as decreases in machine efficiency due to excessively large work assignments, deterioration of quality because of lack of operator attention where the operator does not have the time required for careful adjustment of details, and where new machinery purchases are to be considered. The proper type of equipment for the particular type of work to be done, the correct maintenance of the machinery in use, reasonable speeds of the machines, adequate but not excessive work assignments, and efficient use and management of labor, are all vital requisites in organizing a mill which will have low labor costs because of its ability to produce with a low ratio of man-hours to total production. Such a mill will remain competitive under any market condition.

Total labor costs per pound of yarn include preparatory processing but for the scope of this discussion only the actual spinning room items will be included. The major operations which must be performed are to handle the roving, lay the roving up on the creel of the spinning frames, creel the roving into the frames, patrol, clean, and piece up the ends, doffing, and maintaining the frames. In this last category are included such essentials as oiling, replacing tapes, and fixing. Also, there will have to be overhauling crews to scour the frames periodically, and plumb the spindles, and there will have to be supervision of the room. The actual percentage of total costs accrued in the spinning room, comparing the cost of spinning to the total costs of weaving fabric, will vary in accordance with many factors such as the construction of the cloth, count of yarn, etc. However, actual studies carried out in a large and very successful print cloth mill, making 30s

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Spinning	36%
Winding, warping, slashing, weaving and cloth room	50%

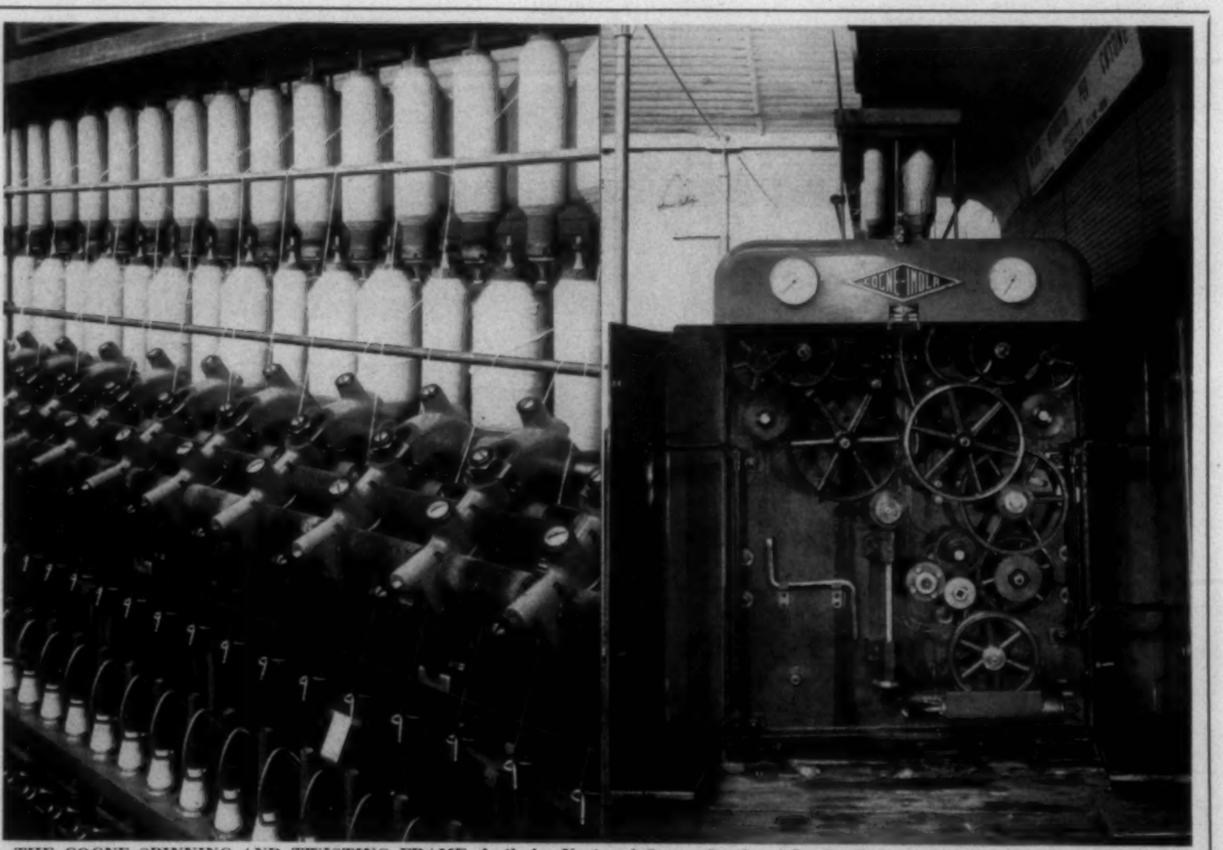
The two major work assignments in the spinning room, or at least the two which have the most affect on costs, are doffing and spinning. Machinery should be used which will be most suited to the particular yarns to be spun, based on increasing the efficiency and production to be expected in performing these two operations. Large packages, both in roving and spinning, and good running work with few ends down per thousand spindle hours are the factors which will cut labor costs in this department.

Doffing can become a very expensive operation if the room is not managed well or organized to eliminate excessive frame stoppage while waiting for doffing. The greatest element in preventing a high efficiency per spinning frame is the time lost in doffing, when the entire frame is stopped with no production per spindle. The longer the frame, the longer it will take to doff and the lower will be the over-all efficiency. It must be realized that the doffer is able to lift or handle just a certain number of bobbins per minute, and therefore, the frames should be operated so that there will be a minimum amount of time lost from the moment the bobbins are full until the empty bobbins are on the frame, pieced up, and the frame running again. In an ideal spinning room, the frames under each doffing crew would be arranged so that only one frame would be ready to doff at a time, so that there would never be a frame stopped waiting for the doffers. In such an ideal set-up the frames would be filled and stopped ready for doffing in a regular manner, so that the doffers would not have to move from one end of their section to the other to reach successfully full machines. It has been suggested that the total number of frames assigned per doffer is not as important as organizing the job so that there will never be frames waiting to be doffed.

The Efficient Spinner

Another important organizational detail, or supervisory matter to which adequate attention should be paid, is that the spinner should be ready to attend to the frame as soon as the doffers have completed doffing. There will always be cleaning and the piecing up of some ends which are a matter for the spinner, not the doffer, and this can be done quickly and efficiently, thereby saving both loss of production and needless waste, only if the spinner is on hand.

The spinner can do much to keep the spinning room running in a smooth, easy manner. A spinner's work assignment can be handled in a satisfactory manner only by being on the job, patrolling frequently, and carefully examining



THE COGNE SPINNING AND TWISTING FRAME, built by Nazional Sogne S.p.A. of Imola, Italy, is now being distributed in the United States by Stellite American Corp. of 60 East 42nd Street, New York City. This cotton frame is built in 1½, 1¾, 2 and 2½-inch ring diameter for bobbins 9.84 inches high. The number of spindles is from 212 to 320 for the four-inch gauge, 2½-inch ring machine, and from 308 to 500 spindles for a 2½-inch gauge, 1½-inch ring machine. The frame is equipped with an improved Leblanc-Roth high draft assembly with four cylinders and spring-weighted rolls. A special feature is the draft gear box in an bath *(right)*, permitting draft changes by moving of levers. Adjustable pigtail guides are said to maintain almost constant balloon. Spindle speeds vary from 6,000 to 10,000 r.p.m.

each frame in turn. It cannot be conducted correctly if the spinners are inclined to neglect their work to talk to other spinners, or if they are spending an undue amount of time resting away from the section.

The spinner's work assignment usually consists of creeling, piecing, and cleaning the upper parts of the frame. In cleaning the frame, the spinner is usually given responsibility only for the creel, thread board, and the drafting element. In some mills cleaners are assigned to roll picking instead of the spinner so that the spinner may attend more sides or spindles. The cleaning is an important task affecting both the efficiency of the room and the quality of the yarn. Probably more bad yarn can be traced back to improper cleaning, both in the spinning room and preparatory processes, than from any other cause. A dirty frame, with lint on the creel to be drawn in with the roving, eyebrows on the clearers, or accumulations of lint on the rolls or thread guide, will produce yarn with innumerable slubs which will either break down the ends, decreasing production, or else will either go through the traveler to remain as a defect in the cloth, or to cause an end break in subsequent processes.

Creeling has a like effect on efficiency and quality. The roving bobbin should never be removed and a new bobbin creeled in until just the last layer of roving remains. A lazy spinner may creel in a new bobbin so that she will not have to patrol so often but this, while helping to maintain frame efficiency and production, will cause unnecessary waste of good, expensive roving. A good spinner will not creel until the old bobbin is almost run out, and will always make sure that the bobbin is free from lint and correctly wound, avoiding the possibility of spinning roving with singles or doubles. In particular, the good spinners will always check, as a habit, to assure that the correct stock is being creeled in.

Last, the good spinner closely examines each spindle and each frame during her patrol. When ends are pieced up she will automatically check to determine why the end is down. If the end breaks repeatedly, the cause is determined and either fixed immediately or else the spindle is flagged and the section man called. An able spinner is a real asset in preventing small mechanical failures such as broken tapes, bad top rolls, worn travelers, or similar maladjustments from causing large production losses.

The objective of this discussion has been to show that there are two main factors which must be accounted for if the spinning room is to be operated on an efficient and economical basis. One is the proper allocation of reasonable work assignments suitable for the type of yarn being spun and the equipment being used. The operating staff must be well trained, earnest in their efforts, and intelligently supervised. The other major factor is the use of spinning equipment of the type suitable to the particular mill, adjusted and maintained to assure ease in operation, and selected so that the efficiency and production required may be obtained with the number and caliber of operators available in the locality. The question of proper equipment will be discussed in later articles.

Cotton Research Clinic Hears How Better Yarn Behavior Obtained With Higher Card Speeds & Application Of Colloidal Silica

ALL phases of cotton production from the field to finished product came up for consideration by the more than 150 delegates to the 1952 Cotton Research Clinic sponsored at Pinehurst, N. C., Feb. 13-15. The average spinning room overseer or mill superintendent attending the clinic sessions would have been fairly well confused by heavy doses of microscopy and molecules (items admittedly necessary in consideration of fiber research), but even at that a good deal of material was brought out which can be used by the mill man in running his job.

Perhaps the paper which drew the most interest among mill supervisors was the one entitled "Putting Research to Work," by E. A. Bentley, superintendent of Swift Mfg. Co. at Columbus, Ga. By increasing carding rate by 34 per cent Swift has obtained better results in yarn breaking strength, sliver variation and neps per grain, according to Mr. Bentley. He described how 98 of his plant's cards had been changed over to the higher speeds with "no apparent deterioration in cylinder, doffer fillets or flats" in comparison with remaining cards in the mill; in addition, cost of supplies for the group operating at increased speeds has stayed in line.

Mr. Bentley, in describing increased carding speeds, stated that since changes were made in the group of 98 cards last June, nine million pounds were produced. The rate of output of these machines was set 25.7 pounds per hour as compared with normal 15.7, and licker-in speed was established at 795 r.p.m. instead of the previous figure of 517. An increase of comb box speed from 1,360 to 1,750 r.p.m. was required, Mr. Bentley said. Ball bearing boxes replaced plain bearing types, which threw out oil when the speed was advanced.

Probably the most serious problem, it was found, was that the combs have to be "extremely accurate," from end-to-end. Milling and then grinding the fingers of the comb before riveting the blade to the comb was accomplished, and there is still a variation though at a minimum, Mr. Bentley declared. Because of high doffer speeds, it was necessary to institute a special training program for card tenders in order to keep waste to a minimum after making the change, it was noted.

Mr. Bentley also explained it was imperative to have better grinding and more accurate settings than previously, especially such critical points as mote knives, licker-in screen and the screen itself. At increased speeds, he observed, the sheet of fiber was laid more evenly across the face of the fillet during a single r.p.m. than previously, when larger portions of fiber were delivered, and instead of being transferred were jerked from the licker-in by the cylinder.

Results achieved by the higher rate included: roving variation was 39.4 compared with 42 at normal speeds; breaking strength of 10s yarns averaged 173.9 against 169.5, and nep counts, from three counts of 50 square inches of card web, were 29.7 per grain as compared with 33. Carding production may be increased 40 per cent without resulting in more neps, or with the same speed and higher licker-in speed, neps will be reduced ten to 12 per cent, Mr. Bentley said.

Dr. Burt Johnson, technologist of the National Cotton Council, sponsor of the clinic, said that it was learned in the inter-industry spinning-ginning tests that large lots of seed cotton could be made into substantially uniform mixes. He felt that the experiments, which were planned to obtain the effects of five ginning methods, could be carried out with 30 bales instead of 125 processed in the tests.

A number of problems cropped up during the tests, Dr. Johnson said. The ginning rate and gin temperature were unknown, and tests were made without controls. Also, he felt that on the basis of government laboratory results as standard, mills did not know how to test yarns.

The work reaffirmed that mill performance is not the same as that in a spinning laboratory, it was stated. No mention was made of there being any effort on the part of ginners to interpret the results of the inter-industry tests as indicative that ginners might adapt their methods so as to provide what might be termed "custom-ginned" cotton staple to mill customers.

Cotton fibers tend to break at points where the spiral twist reverses, and a high concentration of weak places was found at tips of fibers, according to Dr. Helmut R. Wakeham, in charge of cotton research at Textile Research Institute, Princeton, N. J. After resin treatment, it was observed, the fiber was more resistant to crimp. This speaker outlined the procedure for conducting an industry-sponsored project that will examine the behavior of fiber properties during all phases of processing. Trials will be made at pilot plants of Dan River Mills, Inc., and American Thread Co. Twelve bales from each of seven master cotton types, selected on a basis of length, strength and fineness, will be made into yarns and fabrics by conventional methods. Carded 18s yarns will be woven into 48-40 sheeting, 36s carded into 80-square print cloth, and combed 36s will be plied.

THE NEW COTTON OPENING MACHINE developed at the Southern Regional Research Laboratory was inspected by Miss Patricia Ann Mullarkey, Maid of Cotton for 1952, during her visit to New Orleans Feb. 14. Here, she is pushing the button that sets the machine in operation. Seven of these openers are now in use by the cotton industry, and three companies are manufacturing them for sale. Mills using the machine estimate they save up to $2 per bale of cotton processed. During her visit in New Orleans, the Maid of Cotton also called on the New Orleans Cotton Exchange.

Addition of colloidal silica to cotton aided in reducing variability of fiber resistance in drafting while increasing fiber friction and tension in spinning processes, according to the findings of Aubrey A. Hobbs, superintendent of Thatcher Plant, Standard-Coosa-Thatcher Co., Chattanooga, Tenn. The speaker did not elaborate on steps in mill application of colloidal silica. He emphasized that this chemical aid must be applied uniformly. Thatcher plant sprays it on the fiber just prior to the picker, he said. According to Mr. Hobbs, the use of colloidal silica enabled a mill to tolerate a lower twist than normally employed with natural fiber. His comments generally confirmed laboratory scale findings that colloidal silica increased yarn strength and uniformity. The latter studies were reported by M. M. Scott, assistant research director, and J. W. Harrison, senior research chemist at Monsanto Chemical Co., Everett, Mass. Both stressed that their reports covered developments in the laboratory stage.

Fiber and spinning tests, along with information on variety and area of growth, are being used increasingly by manufacturers to supplement grade and staple and to establish the "intangible" quality known only a few years ago as "character," said W. J. Martin, assistant chief of research and testing division, Cotton Branch, Agriculture Department's Production and Marketing Administration. Data for 1950-1951 indicated about one-fourth of the cotton at the mills was tested for foreign matter content by the Shirley analyzer, he said. "Emphasis on purchases from specific areas of growth has been doubled, and recently applied to almost three-fourths of the cotton used by mills that were checked.

From laboratory results for a new crop year, mill men are now able to make "a very intelligent estimate" of what cotton of a particular grade and staple would produce in the mill, or what could be expected of cotton from a certain territory that which varies in grade-staple from the tested lot, Mr. Martin asserted. Although laboratory spun yarns from the same mixes averaged about 15 per cent higher in strength than commercial runs, Mr. Martin pointed out that mills following production methods are not expected to obtain "the same level of quality" as a laboratory operating on a smaller scale under close control.

Saco-Lowell Taking More Defense Work

David F. Edwards, president of Saco-Lowell Shops, in the company's recent annual report to stockholders, declared that "the defense program has created a severe shortage of critical materials and is forcing a sharp curtailment of textile machinery production. To compensate for this, a substantial amount of defense work has been undertaken."

Vittorio Mussolini, son of the erstwhile Italian dictator, now owns a textile mill in Argentina.

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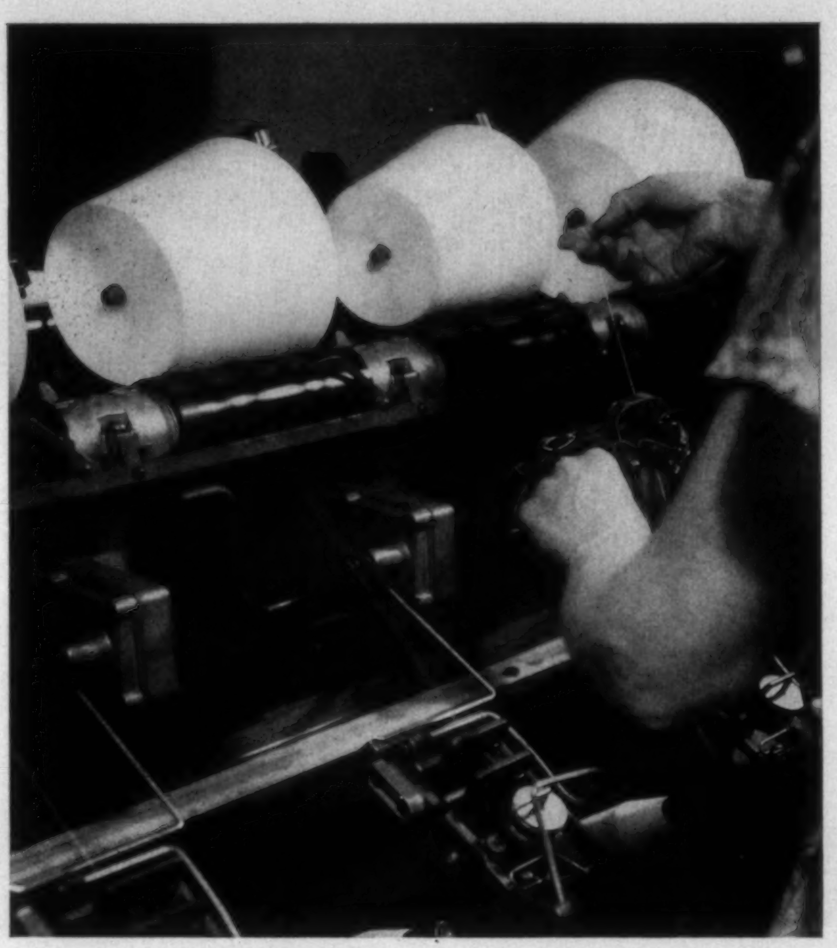

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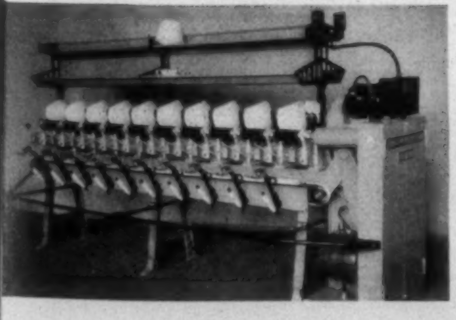

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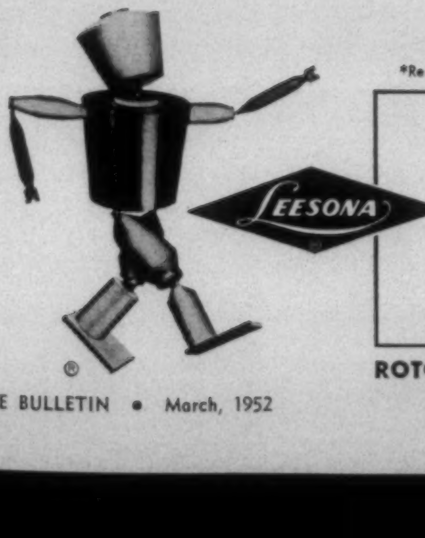

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Recent Yarn Manufacturing Machinery Developments

By JAMES L. TRUSLOW, Saco-Lowell Shops, Biddeford, Me.

DURING the last few years many genuinely important improvements have been made to our machinery. Perhaps the best way to discuss these is to start with the opener room and work through to the spinning, pausing along the way to discuss interesting points as they arise.

Picking

One of the features of recent years has been the rapid introduction in cotton fields of this country of mechanical harvesting. This has raised new problems for the mills and for the machinery builders. It has become necessary to deal with an increased amount of stalk, leaf, and other heavy types of trash in the cotton. Thinking and experimentation by our experts have resulted in the development of what we call the new Universal grid bars for picking. Many of you are familiar with these bars and know what a remarkable job they are doing but they are sufficiently new so that it might be worthwhile to describe them briefly for the benefit of those who have not so far had experience with them.

In the first place, the Universal bars can be applied to existing pickers and are suitable for use with all of our blade and carding pickers. They are not limited to any one beater position. In other words, if you have a three-beater picker, all three of the beaters may be equipped with Universal bars. Until the development of the Universal bars, the picker beater was surrounded by a considerable arc of grid bars, most of which were of doubtful utility. There was a question as to how much cleaning was done by the majority of these bars. The air current situation was such that waste was actually sucked back in through some of the bars and returned to the cotton. In an effort to get in as many bars as possible, the construction of the individual bar was dangerously light. The net result was a construction which was complicated, expensive, difficult to set and maintain, and of doubtful effectiveness. The Universal arrangement consists of four grid bars of sturdy cross section which are placed around the arc of the beater directly below the feed rolls or pedals. Each bar is individually adjustable as to setting and angle. In addition, the four bars can be adjusted as a unit. Immediately following the bars in the arc of the beater, there is a steel bottom plate which is of course adjustable. Following that, there is an aperture across the beater through which air can enter and, from this point on, the beater is enclosed in a sheet steel undercasting. The result of all this is that trash struck downward from the feed rolls or pedals is knocked out by centrifugal force and by the action of the Universal bars. The clean cotton is carried along into the air stream which takes it to the cages. If additional cleaning is desired, the first Universal bar is completely removed, leaving a gap below the feed rolls or pedals through which trash can fly out. For even more cleaning, the second bar is also removed, making the gap still wider.

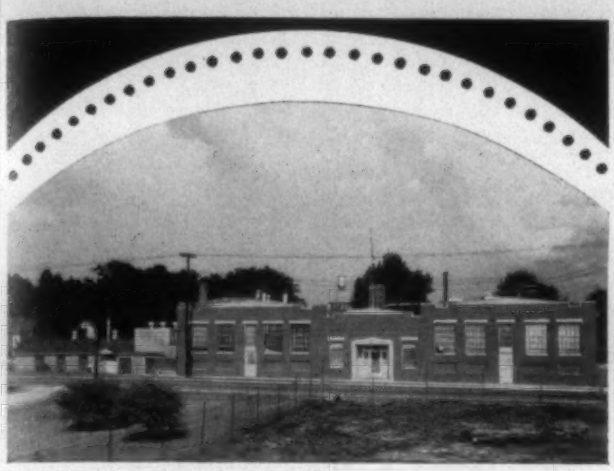
When the bars were first introduced, some customers were disturbed by the appearance of white cotton in the droppings. Careful examination of this waste, however, revealed that it was made up of motes and immature cotton which it is most desirable to eliminate as early in the manufacturing process as possible.

Discussion of the Universal grid bars leads naturally to another development—the fringe roll, a simple but very effective idea for improving the quality of the work not only at the picker but also at the card. The first application was on the picker and the thinking was that when the cotton came through over the pedals at the finisher beater, it was presented to the action of the carding beater in the form of a fringe. There was a tendency for long locks of cotton to be bent back away from the beater and then to come through as bunches whose fibers had not been properly separated by the action of the beater pins. To overcome this, a roll with a diameter of 1½ inches, wrapped with saw-tooth wire and running the full width of the picker, was placed just below the evener pedals. This roll served as a backing for the fringe of cotton, holding it in a position where it would best be combed out by the pins of the Kirshner beater and also causing the fibers to be held in the points of the saw-tooth wire so that they would go through in orderly fashion and not in a succession of unopened locks or bunches.

We now have quite a number of these fringe rolls running in mills all over the country and have had some extremely favorable reports on them. The most obvious effect of their use is to produce a lap which has a smoother appearance but it is probable that the real main advantage is in securing better homogeneity and fiber separation. The fringe roll can be used in connection with the Universal grid bars. When this is done, the fringe roll takes the place of the first Universal bar and only the second, third and fourth bar positions are furnished.

The success of the fringe roll on pickers led our experts to wonder whether the same idea might not be useful in carding long synthetic fibers. A construction has been developed where two fringe rolls are placed just below the feed plate of the card around the arc of the licker-in. The results have been most encouraging and, as might be expected, the fringe of fibers hanging over the nose of the feed plate is supported and restrained quite effectively. Fiber separation by the licker-in wire is improved and the feeding through of locks and lumps is greatly reduced.

Before leaving the picker, I think that we should mention



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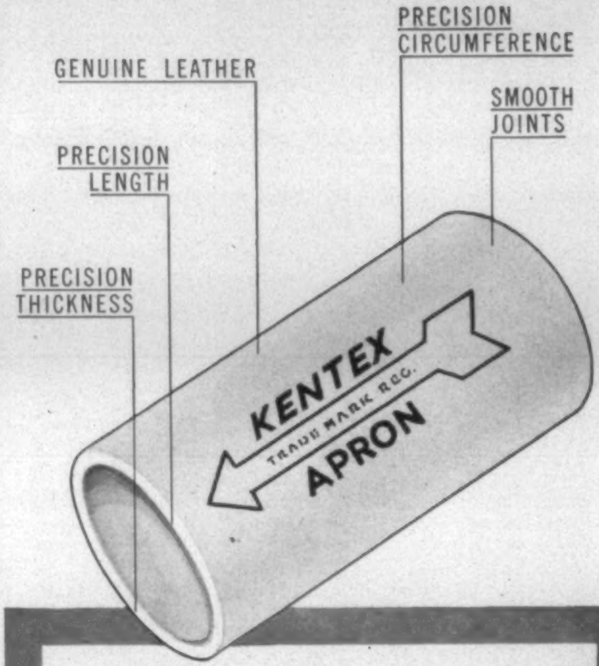

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one improvement which has spread very rapidly through the mills during the last two years. I refer to pneumatic rack control, which we first introduced at the textile machinery show in Atlantic City during the Spring of 1950. Most of you are familiar with this construction. It is easily applied to existing Saco-Lowell and Kitson pickers and substitutes for the unreliable friction formerly used to exert downward pressure on the lap while it was being built, a smooth, uniform, and instantly releasable pneumatic pressure. The source of pressure is a compressed-air cylinder containing a piston with a rack rod projecting through the end of the cylinder. The teeth of this rack engage with a spur gear on the cross shaft and the pressure is transmitted through the loggerheads and down onto the lap rod. The old friction construction was difficult to maintain and jerky in its action. The new arrangement, because of its smoothness and dependability, permits the use of increased pressure if desired. Many mills are making denser laps and getting more yards in their laps as a result of installing pneumatic rack control.

Carding

In the card room, the first point of interest is perhaps the growing desire to increase the size of the cans at the cards themselves and also at the drawing and combers. I was in Europe last Spring and one thing which struck me most forcibly was to see nine-inch diameter cans still in use in so many mills in England and on the continent. As you know, in this country, we seem to be heading towards at least a 14-inch diameter can at the card and quite possibly 15-inch diameter cans at drawing and combers. From the point of view of the machinery builder, this meant a good deal of design and engineering work and there have been some problems in connection with the production of suitable coiler arrangements to make a good can using these large diameters. This work is still going on but I think we can expect to see the larger cans rapidly adopted in a majority of mills. The advantages in reduction of handling costs and the quality advantages through reduction of sliver piecings are so great that the progressive mill will almost certainly brush aside minor difficulties and go ahead with this program.

Combing

During the last few years, we have been called upon to build a very large number of combers and have had an opportunity to gain a very wide experience in the problems and requirements of combed mills. One development which has led to the installation of large numbers of combers has been the growing demand on the part of the American housewife for combed bed sheets and pillow cases. Not so long ago, these were luxury items and considered to be out of the reach of the average family. That is no longer the case and it is remarkable how economically combed percale can now be produced. It is important, however, to keep firmly in mind the purposes for which combers are used as the results otherwise may become very expensive.

In the first place, the comber is a parallelizer of cotton fibers. The action of the needles straightens the individual fiber and improves the arrangement of the fibers with relation to each other. Translated into the final cloth, this gives a smooth and lustrous effect. In the second place, the comber is a remover of unwanted material, mainly neps and short fibers. In the yarn and cloth, this function of combing produces improved smoothness, appearance and strength. It is most important that the comber should not become a remover of valuable fibers. Mills in general are very alert to this point and realize that the presence of long fibers in the noil is a very serious matter.

More and more, we are beginning to think at Saco-Lowell that the comber cannot be considered by itself. One has to study as a unit process everything that happens between the card and the back of the roving frame. This involves pre-combing preparation and post-combed drawing. We are learning a lot about the preparation between the card and the comber and there are some things about which we are pretty sure. One is that it is most desirable that the slivers should be rolled up into laps to feed the comber without any draft taking place on the machine which does the rolling-up. For this purpose, we use the Saco-Lowell high-speed lap winder. The result of this procedure is practically to eliminate any sign of splitting of laps on the comber. I recently visited a mill where they had been running old combers fed from ribbon lap machines and where they were installing new combers with lap winders. For a brief period, the old and the new were running side by side and it was quite startling to observe the difference in the way the old ribbon laps were unrolling as compared with the complete freedom from splitting on the new combers.

Another point which we believe to be important in preparing cotton for combing, especially in the case of longer staples, that the cotton should be presented to the needles of the half-lap in as parallel arrangement as possible. For this reason, many mills run the card sliver through a nine-inch lap winder and then process the resulting laps on five-roll drawing with a draft of 14 or 15. This relatively high draft at the pre-combing drawing, because of the degree of displacement of the fibers which results, produces an arrangement of fibers in the drawing sliver which is smooth and parallel and, in addition, results in the individual fibers being well straightened before reaching the comber. On the other hand, there is less and less lap-back five-roll drawing being used following combing. The fibers in combed sliver are so parallel and non-cohesive that it is not very satisfactory to run this type of sliver behind a high-speed lap winder. There is a tendency for individual fibers to become bent over backward in the form of a little hook. There is also a tendency for laps made from combed sliver to split on the back of the drawing frame. For the reasons just given, five-roll lap-back drawing is becoming more and more popular before combing and less used following combing.

I believe that most of you must be familiar with the drawing frame drafting arrangement which we call the three-over-four system. This system has been particularly successful on drawing frames following combers and I think it is safe to say that most of our customers feel that one or possibly two processes of three-over-four drawing following combing make the ideal arrangement. The regularity of the sliver produced by this type of post-combing drawing is truly remarkable. I have seen it test as low as ten per cent variation.

Before leaving the subject of the comber, I should per-

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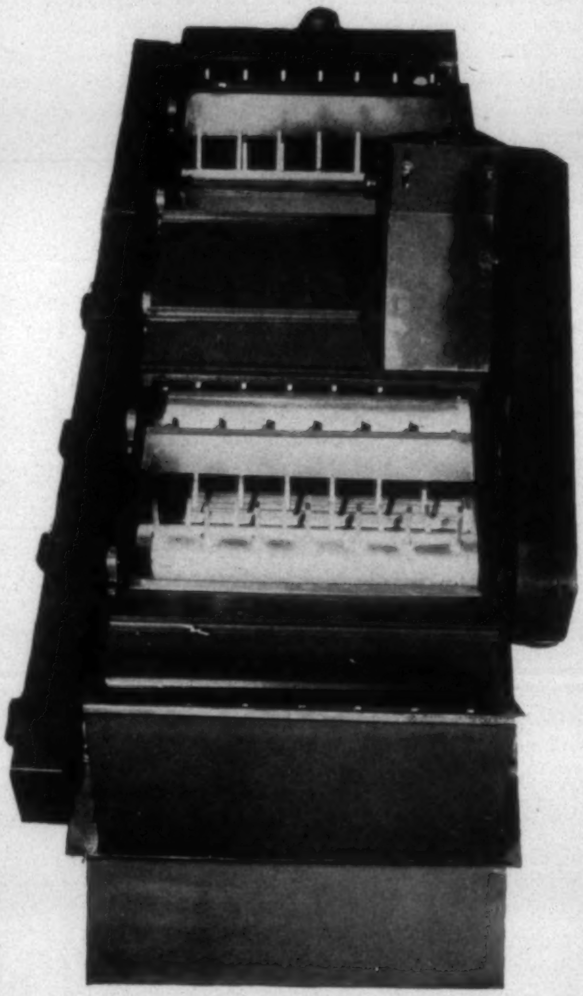

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haps mention that very recently our people at the Sanford, N. C., plant have worked out a system of central station lubrication for the comber about which our customers are quite enthusiastic. This system eliminates the necessity of individual lubrication at a large number of rather inaccessible points. It also reduces the amount of time that a comber must be stopped for lubrication since all of the points served by the central station system can be lubricated while the comber is in motion. This is the sort of improvement which is not very revolutionary but which makes a tremendous difference to the people who actually have to work with the machines.

Roving

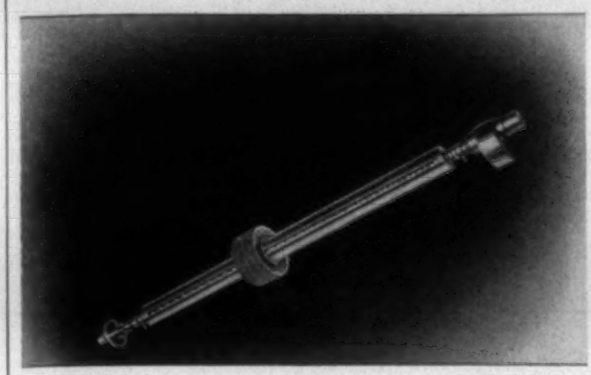
Having left the drawing, we should next stop and take a look at what has been going on in connection with the roving frame. One thing which is quite interesting is the tendency toward using large flyer sizes for a given hank of roving. This tendency, coupled with the use of much higher drafts at the spinning frame, results in our seeing for more 10 x 5 and 12 x 6 machines and increasingly smaller numbers of 8 x 4 and finer frames. It seems only a short time ago that the mills were running three and four processes of roving. As we all know, it is a very rare set of circumstances today which call for more than a single roving process. High drafting systems on the roving frame are pretty well standardized so far as cotton is concerned and no longer make interesting conversation. The real development work along these lines is in producing drafting arrangements suitable for use with long staple synthetics and blends of synthetics with natural fibers. In this connection, I should perhaps mention a very promising system which we are just putting in to a first full length mill installation. It is intended particularly for long fiber synthetics of coarse denier run alone or blended with wool. It is known as the F-5 and will handle any desired fiber length up to nine inches. It is marked above all things by great flexibility. Fiber control is secured through the pressure of an upper second line of smooth steel rolls downwardly against a synthetic apron of the type used with Roth and Shaw drafting. The important feature is that these upper control rolls are adjustable both horizontally and vertically so as to increase or diminish the amount of control exerted on the fibers. As the control roll is lowered, it depresses the bottom apron and increases the pressure between itself and the apron, thus raising the control. On the other hand, as the control roll is raised, the pressure between it and the apron is decreased and a lighter control results. Naturally, the upper control roll must be and is positively driven and this results in that ideal combination of a construction giving yielding fiber control but of which all the elements are positively driven without any possibility of intermittent turning.

I mention this system merely as an example of the specialized applications of drafting theory which are necessary today in order to handle the increasing number of special situations brought about by the growing use of all types of synthetics and blends. This is a field which has tremendously broadened the scope of the textile engineer and in which there are still opportunities for improvement which are being vigorously explored by the machinery builders and by the mills. The field of synthetics is not only the most fascinating one today but it is perhaps the most promising one for the machinery builder. The great opportunity seems to lie in producing yarns of a type which we have heretofore associated with the worsted industry. The equipment necessary to do this has been largely developed and is being constantly and rapidly improved and extended. It seems likely that, as the newer synthetics come into large-scale production during the next two years, we shall see spinning plants constructed to run them in lengths up to at least five inches. The special equipment designed for this purpose can equally well be used to run wool or blends of synthetics with wool. As a matter of fact, one often hears about the threat of synthetics to the cotton textile industry but I think that most of us are beginning to realize that the units which are really threatened are much more apt to be the conservative Bradford and French-type worsted mills with a bad location and a heavy investment in large quantities of conventional worsted equipment which they are unwilling or unable to consider replacing.

Spinning

As you know, the Saco-Lowell Roth system of drafting is one of the most commonly used in this country. I suppose that there must be between eight and nine million spindles at least in operation today. It is an excellent system, very simple and easy to clean and maintain, and most of its users are thoroughly satisfied with it. On the other hand, there are cases where mills feel that they would like to run higher drafts than are possible with the Saco-Lowell Roth system and it seemed worthwhile to give some thought to working out a means by which this could be done without constructional changes of a very expensive or complicated nature. The problem is largely one of setting and, so far as the bottom apron of the Saco-Lowell Roth system is concerned, one could not have a more ideal construction for securing a very close setting to the bite of the front rolls. The apron is thin and flexible and operates under tension. Because of this and the position of the nose bar, the Roth apron comes about as close to the front steel roll as it can come without actually touching. There is no danger of contact if the apron should grow with use as any additional slack is merely taken up by the tension roller.

Our development idea has been to retain these good features of the Roth bottom apron and to replace the ordinary Roth top middle roll and pencil roll by a simple cradle carrying a short endless synthetic apron of the type which has been used for the last 30 years in double-apron high draft systems. By the use of this top apron, a closer setting and more positive fiber control can be secured than has been possible with the pencil roll construction. The application can be made simply and cheaply to existing Saco-Lowell Roth frames and there is practically no erection expense or lost time involved in making the change. It is necessary only to lift out the top middle roll and pencil roll and drop into place the new Duo-Roth units. The weighting is then replaced and the frame is ready to start unless the change in the draft is desired. If the mill wishes to increase the draft very markedly a new constant may be required and that may entail a certain amount of gearing at the head end but there are no serious problems in this connection. It just means that you may not be



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able to make the change without breaking down the ends.

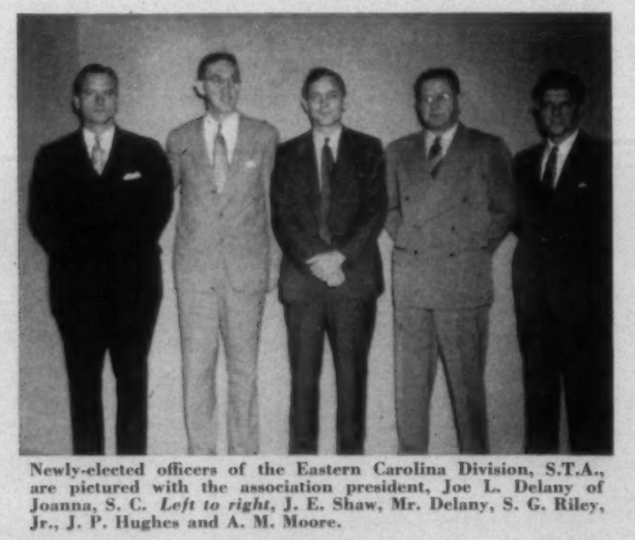
While the Duo-Roth system is thought of primarily as an improvement to existing Saco-Lowell Roth frames, there is no reason why it cannot be furnished as a changeover job on other types of frame or, for that matter, as a drafting system on new spinning frames. It would seem to have its most interesting field in carded yarns using cottons up to 1 1/16 inches. It probably gives a closer setting than any other type of spinning high draft system and the careful tests run so far indicate that it produces an extremely strong and even yarn.

Eastern Carolina S. T. A. Elects New Officers

MEMBERS of the Eastern Carolina Division of the Southern Textile Association, who gathered March 8 for their semi-annual meeting at the North Carolina State College School of Textiles, heard the foregoing address by Mr. Truslow, and elected new officers for the coming year. With the retirement of J. E. Shaw (assistant superintendent of Rosemary Mfg. Co., Roanoke Rapids, N. C.) as divisional chairman, S. G. Riley, Jr. (superintendent of Pilot Mills Co., Raleigh) was elevated to that position from the vice-chairmanship. J. P. Hughes (superintendent of Cone Mills Corp., Hillsboro, N. C.), formerly secretary, was named vice-chairman, and named to the position of secretary was A. M. Moore (superintendent of Erwin Mills No. 6) of Durham, N. C.

A new member (for four-year term) of the Eastern Carolina Division's executive committee is E. H. Fuller, assistant superintendent of Roanoke Mills Co. No. 2, Roanoke Rapids, N. C. Continuing on the executive group are W. A. J. Peacock, superintendent of Borden Mfg. Co. at Goldsboro, N. C.; C. A. Phillips, superintendent of Edenton (N. C.) Cotton Mills; and J. K. Bruton of Erwin Mills, Durham.

Besides the accompanying paper and an address by C. W. Bendigo of the new product development department of American Cyanamid Co. (see Page 62, this issue), another address was made by M. V. Wells of the industrial relations department of William Klopman & Sons, Inc., Asheboro, N. C. Mr. Wells' remarks will be published in an early edition of this journal. The program concluded with a showing of the North Carolina Industrial Commission textile mill safety film entitled "As Others See Us."



Newly-elected officers of the Eastern Carolina Division, S.T.A., are pictured with the association president, Joe L. Delany of Joanna, S. C. *Left to right,* J. E. Shaw, Mr. Delany, S. G. Riley, Jr., J. P. Hughes and A. M. Moore.

Georgians To Discuss Carding, Spinning

Georgia mill men will exchange information concerning carding and spinning problems at the Spring meeting of the Textile Operating Executives of Georgia April 26 in Atlanta, Ga. The meeting will be held in the Harrison Hightower Building of the A. French Textile School, Georgia Institute of Technology.

A questionnaire seeking information of problems encountered in these mill operations has been distributed to members of the association by Herman A. Dickert, director of the A. French Textile School, and secretary-treasurer of the T.O.E.G.A. Replies will be published in time for distribution at the meeting.

Gwaltney Spinning Frame To Be Exhibited

The Gwaltney spinning frame which has been developed by the Saco-Lowell Shops, and has many radical changes from the conventional spinning frame, is attracting much interest.

A short model of the Gwaltney spinning frame will be shipped to the School of Textiles at North Carolina State College, Raleigh, about May 1 and be on exhibition there for two weeks after which it will be on exhibition at Clemson (S. C.) College and then at Georgia Tech, Atlanta.

Among recent patents granted Carolinians, according to Paul B. Eaton, are as follows:

Patent No. 2,548,719 has been issued to Jesse B. Goodgame of Charlotte, N. C., for traverse motion drive for spinning and twister frames. This invention has been assigned to Precision Gear and Machine Co. of Charlotte, and relates to a new type of traverse motion drive for spinning frames, twister frames and the like. The invention is designed to provide improved chain type drive means for the builder cam associated with the builder motion of the spinning frame.

Patent No. 2,554,104 has been issued to Thomas L. Hand of Belmont, N. C., for a stop motion for carding machines, assignor of one-half to F. M. Grier also of Belmont. This invention relates to a new type of safety mechanism for stopping the machinery of a carding machine whenever the density of the sliver decreases beyond a certain amount. The invention covers a trumpet which is movable and is mounted on the card machine against a conventionable trumpet on the machine through which the sliver is moved.

Patent No. 2,550,761 has been issued to Ralph B. Blackwood of Lumberton, N. C., for a spinning and twister ring. This invention provides a yarn guide apparatus for spinning frames, twisters and the like comprising an annular member or ring having a groove extending around its inner surface in which a ring is loosely mounted and to which yarn may be directed from a suitable source such as the drawing rolls of a spinning frame. The yarn passes between the outer periphery of the last-named ring and the bottom of the groove in which it is disposed and then extends to a rotating bobbin.

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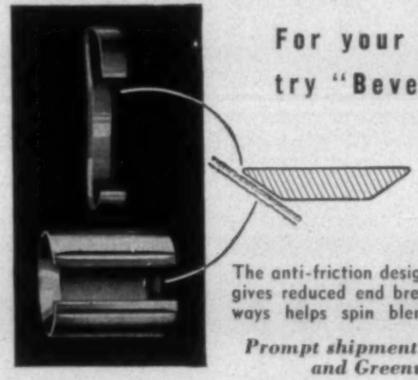

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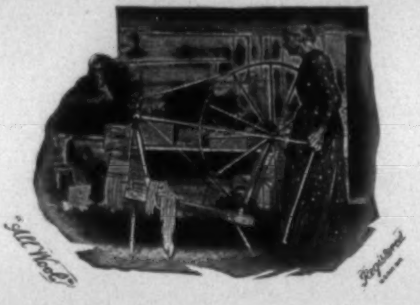

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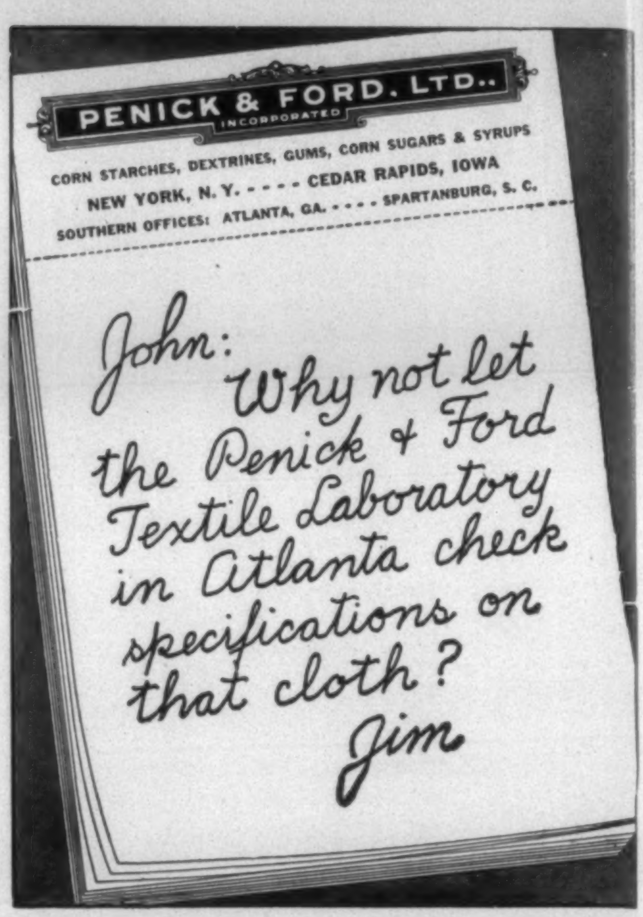
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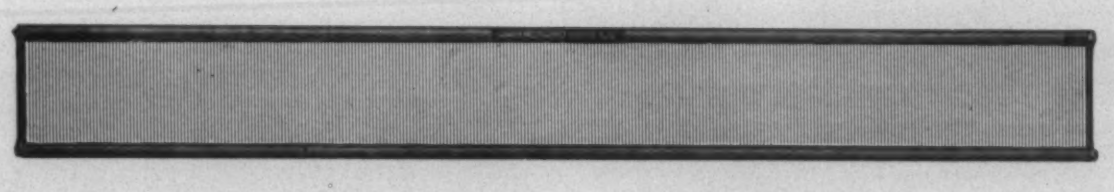

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By FRANK D. HERRING

Part 34 – Bad Selvages

WE REFER to the two extreme outer edges of a woven fabric as the selvages. Many fabrics are woven with the same draw of the warp yarn, through the harness and reed, on each outer edge as is used in the main body of the fabric. We refer to this as the plain selvage. On other woven fabrics it is necessary, for different reasons, to double a specified number of the warp threads in the draw through the harness and reed. We refer to this as a drawn selvage. Then we have selvages on many fabrics where the warp yarn is drawn through special harness, independent of the harness for the main body of the fabric. We refer to this as a tape selvage. As a rule, we have more warp yarn breakage on the selvages than any other part of the warp. This is due to the fact that more strain is put on the selvage threads, due to the natural contraction of the cloth, and the pull exerted on the outer selvage threads by the filling yarn as the shuttle passes through the sheds from end to end of the lay.

Rolled Selvages

We refer to a rolled selvage when the extreme outer warp threads have the appearance of being crowded in the fabric, after the interlacing of the warp and filling yarn, and the fabric is thicker at this point than the main body. This is a very objectionable type of bad selvage on account of its appearance and also the trouble encountered in the finishing department. To correct rolled selvages proceed as follows and check the things in the order named.

(1) Check to determine if the warp threads are drawn correctly through the harness and reed, as excessive number of threads drawn through either the harness or reed will give the appearance of a rolled selvage.

(2) The temples. If the temples are set too close in it will cause the selvages to pucker and roll.

(3) The shuttle. Make sure that the bobbin in the shuttle is tight and pointing perfectly straight. If the bobbin is loose or out of line it will put excessive tension on the filling and this will exert sufficient pull on the outer selvage threads to cause them to be unduly crowded and roll. Check the bristles, or friction in the shuttle, as excessive tension from this source will cause the same trouble as mentioned above.

(4) The harness cams. (This applies to fabrics woven with two harness only). The harness cam should be set, with the two harness level, with the front harness cam pointing towards the front of the loom with the shuttle in the shipper handle end of the loom. The harness cams change positions, up and down, while the shuttle is in the shuttle box, and this causes the filling yarn to pull against the warp yarn in the down harness while the shuttle is passing through, and the above harness setting will cause the filling yarn to pull against the extreme outside warp thread on both selvages while the shuttle is passing from end to end. If the harness cams were reversed from the above setting, the back harness cam pointing towards the front of the loom, the filling yarn would pull against the second warp thread from the extreme outside of the selvage, and on some fabrics this will result in rough, uneven, rolled selvages.

Stringy Selvages

Many things will cause stringy selvages. To correct this trouble proceed as follows and check the things mentioned in the order named.

(1) The right-hand front box plate. (This applies to looms equipped with the Stafford thread cutting devices only). Most Draper looms in operation today are equipped with the Stafford thread cutting device. It is the most effective thread cutting device yet devised for doing the job of handling the severed strand of filling after the transfer. Of necessity, it is a rather complicated arrangement, because it performs a complicated job. When using this device the strand of filling on the outgoing bobbin is cut near the shuttle eye, and this gives positive assurance that the severed strand of filling attached to the outgoing empty bobbin will be pulled clear of the shuttle eye by the falling bobbin into the bobbin can. This action leaves a strand of the severed filling extending from the cutting knives to the selvage of the cloth, and this strand of filling must be pulled clear of the shuttle box through a slot in the front box plate. This box plate has a leather covering on the inside to prevent excessive wear on the shuttle. This leather covering is secured in place by glue which binds it to the front box plate. Sometimes the glue will give way and allow the leather covering to work loose, and in this event the slot in the box plate will become closed and prevent the strand of filling being pulled clear. This will cause the filling strand to be pulled clear of the gripping blades of the cutting knife and will allow the filling strand to be left dangling, and the temple thread cutter will not cut it, because it will be below the temple cutting knives, and the result will be strings on selvage, and very often a portion of this severed filling will be pulled into the main body of the cloth, resulting in jerk-ins and also stringy selvages. If the leather covering on the box plate

becomes damaged or excessively worn the same trouble as mentioned above will result. So, the fact should be determined that this binder covering is in good condition before checking anything else, because everything else can be in perfect condition, and a bad binder covering will nullify the entire set-up.

(2) The Stafford thread cutting device. Put the shuttle in battery end of loom with the transfer mechanism indicating a transfer, and check the entire Stafford thread cutting device from the shuttle feeler through to the cutting knives. (I have covered the checking and setting of this device in a previous article, and if this rule is followed it requires only a very few minutes to check the entire device through and locate the trouble and make the necessary adjustments to correct it). Be sure and check the cutting knives and the gripping blades carefully to determine if the knives are cutting the filling strand cleanly and the gripping blades holding it securely until the temple knives cut it near the selvage of the cloth.

(3) The right-hand temple. The temple thread cutting knives should cut the strand of filling immediately after the transfer of the bobbin has been made. If for any reason they do not, the strand of filling will be pulled out of the gripping blades of the Stafford device, and the result will be jerk-ins and stringy selvages. A great many of the weave room overseers do not have the temple thread cutting knives oiled. This is a very costly omission because a few drops of heavy oil, in the right place, applied about once or twice each week will prolong the usable life and effectiveness of the knives many times over. It is not necessary to remove the knives from the temple to oil them. The oil can be applied on the exposed top of the knife just behind the temple cap. A very heavy oil should be used. This not only prevents excessive wear on the knives, but will greatly extend the usable life of the temple bar, and the knife and the bar are both expensive parts.

(4) The picker and picker stick on right-hand end of loom. On the right-hand end the picker contacts the shuttle point, or knurl on the end of the shuttle near the shuttle eye, and when the picker and picker stick moves forward driving the shuttle out of the box on the pick the strand of filling extending through the shuttle eye will become slackened and lag back sufficiently to allow it to contact the picker and the picker stick, and if the picker is excessively worn to the extent where it has rough or protruding places on it the filling will become caught on these protrusions and make stringy selvages. Sometimes the picker stick will become worn and splintered just below the picker and the same thing as mentioned above will result. The picker screw should never be put in the front side of the picker and stick on the battery end, as the filling will become caught on the head of the screw and make stringy selvages. It is safe to put the picker screw in from the front side on the shipper handle end of the loom, because the picker contacts the shuttle on the end opposite the shuttle eye, and the filling yarn never contacts the picker or stick on this end.

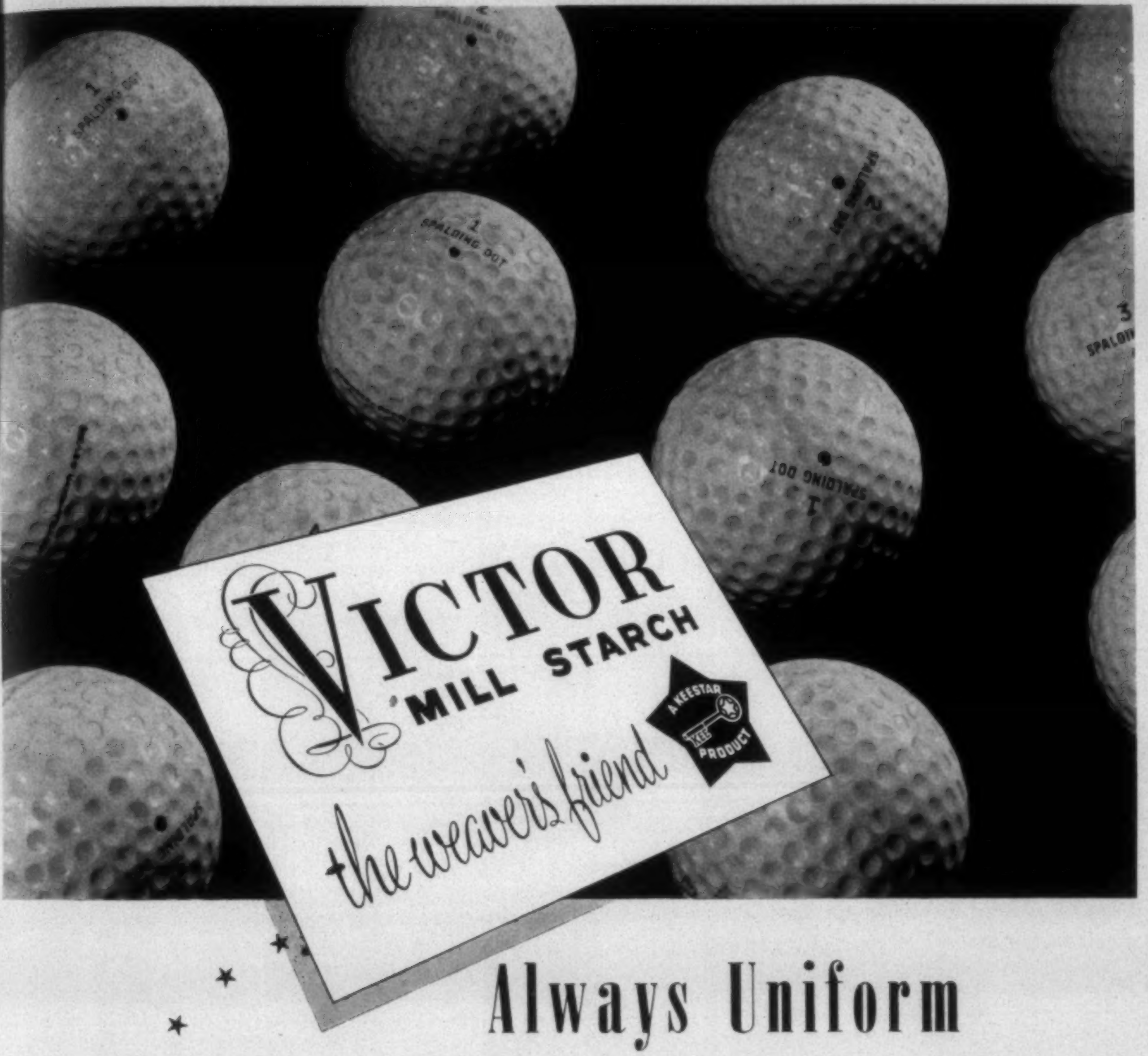
Buttonhole, or Uneven Selvage

The above title implies that the selvages are pulled in by the filling tension at intervals, and thereby causing the cloth to be narrower at these pulled-in places. This type of selvage gives an unfavorable appearance to the fabric, and is bad for a number of other reasons. To correct this trouble, proceed as follows and check the items mentioned in the order named.

(1) The shuttle. Make sure that the bobbin in the shuttle is tight and pointing straight. Most of these pulled-in places on the selvages occur when the filling yarn is almost all run off the bobbin, and this condition is considerably aggravated if the bobbin is loose or out of line. Check the shuttle bristles, or tensions, to determine if excessive tension is being exerted on the filling yarn, and if so, the bristles should be removed and correctly placed. Sometimes too many bristles in the shuttle will put too much tension on the filling yarn and cause the selvages to be pulled in at intervals, and sometimes not enough bristles will cause the same trouble. As previously stated in these articles, it is absolutely necessary to have sufficient tension on the filling yarn at the tip end of the bobbin in order to tie it down at this point to prevent it from becoming unthreaded, out of the shuttle eye, and breaking, but on the heavier filling yarns it is also necessary to place one or two bristles back about half way on the bobbin to control the ballooning of the filling. If this ballooning of the filling is not controlled it will balloon outside of the shuttle walls and become trapped against the top and bottom sheds of the warp and create more tension on the filling strand than the bristles will, and consequently the selvages will be pulled in when the filling is run off down low on the bobbin.

(2) Timing of the harness cams. More buttonhole and uneven selvages are made from improper harness timing than from any other source. As previously stated, the pull of the filling yarn on the selvage threads is always on the warp yarn in the down shed. The warp yarn in the down shed is always tighter than the yarn in the top shed, and this is a desirable condition, because the tighter warp threads are not so easily pulled in as if they were slack. The harness cams should be timed so the harness sheds will remain open until the shuttle enters the opposite box on its passage across the lay. If the cams are timed too early the sheds will start closing before the shuttle enters the shuttle box, and in this event the bottom shed, on which the filling yarn is pulling, will become slackened while the tug of the filling is still on it, and it will give way to this tug and uneven and buttonhole selvages will result. Both harness sheds become very slack while they are changing up and down. (The above-mentioned facts are one reason that I prefer the quick-changing harness cams. The sheds remain open longer, because less time is consumed in changing them up and down).

(3) The build of the yarn on the filling bobbin. Examine the build of the yarn on the bobbin to determine if it is put on in such a way that it will weave off without difficulty. (I have shown in Part Twenty-Six of the July, 1951, issue of TEXTILE BULLETIN the proper and improper builds of the yarn on the bobbin). If the bunch on the butt end of the bobbin is too large the filling will pile off behind the bunch just before the transfer of the bobbin, and this will create a momentary tug on the filling yarn sufficient to pull the selvage threads in and make buttonhole and pulled in selvages. (This is illustrated in Fig. 81). If the taper of the yarn on the butt end of the bobbin is too short the yarn will pile off while the loom is in operation, and the results will be the same as mentioned above. (This



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is illustrated in Fig. 83). The two conditions mentioned above will be much more prevalent on the coarse, heavy filling yarns.

(4) The temple burrs. The temple burrs are equipped with a series of small steel pins which are supposed to grip the two outer edges of the cloth and hold it in an extremely expanded condition. Sometimes the temple burr screws will become worn and broken, and this will allow the burr pins to contact the temple bar cap and wear off and destroy the sharp points of the pins and render them ineffective, and when this condition exists the pins should be replaced because the slightest tug of the filling yarn on the selvage threads will cause them to be pulled in and make uneven and buttonhole selvages. The burrs are made in right and left hands. The pins are placed in the burrs in a circular position, like the threads on a bolt, and if the wrong hand burr is placed in the wrong temple the cloth will not be held in its fullest expanded position, and the same as mentioned above will result, and also, these two conditions will create excessive warp yarn breakage on the selvages.

Slack Selvage

Slack, or puckered selvages in cloth is a very objectionable defect, because they give trouble while weaving by causing excessive warp yarn breakage, and also loom stoppage from the warp stop motion, and they also give much trouble in the finishing department. Numerous things can cause slack selvages, because anything which causes an uneven or varying tension on the warp yarn at this point will create this condition. They can be, and some are, made on the warpers and slashers. If the yarn is piled too high on the beam, near the beam head, on the warpers or slashers, slack selvages in the cloth will result, because the yarn will be delivered from the loom beam under a varying tension. If the yarn is piled too low on the beam at this point the same thing will result. This trouble is usually caused on the warpers and slashers by a warped or crooked beam head. This will cause the yarn to be high on one side of the beam and low on the opposite side. But many things on the loom will make slack selvages, so, to correct this condition on the loom proceed as follows and check the items in the order named.

(1) The temples. Check both temples and see that they are in good condition and functioning properly. If the temples are set too high in relation to the race plate this will cause additional strain to be put on the warp yarn at the point of interlacing of the warp and filling yarns, and this will result in a slack puckered place in the woven fabric. Very often the temple burrs will collect loose strings and waste to the point where they will become clogged and choked up so that they will not turn freely, and this will cause the same troubles as mentioned above.

(2) The harness. See that each shed of the harness is properly adjusted in relation to the race plate, or shuttle race. If one or more of the harness are set too low, dragging on the race plate, this will cause the tension of the warp yarn to vary at the point of interlacing, and result in slack selvage. See that the harness cams are timed correctly. If the cams are timed too late, with the reed near the fel, or beat of the cloth, this will cause the cloth to bag back and have a rough uneven appearance on top and bottom. In this event, both of the selvages will be slack and puckered, because there is always more strain on the warp yarn at, and near, the selvages than in the main body of the cloth.

(3) The whip roll and stop-motion girt. These two parts should always be set level, or on parallel lines with the take-up roll. If either is too high, or too low, on either end it will create an uneven tension on the warp yarn at the point of interlacing, and make puckered selvages.

(4) The take-up roll. The take-up roll should always be set level, or on parallel lines with the race plate. Make sure that the take-up roll covering is in good condition, because if the covering is broken at any place it will cause a slack place in the cloth at that point, as this creates a varying condition at the point of interlacing of the warp and filling yarns. Make sure that there is no accumulation of waste or loose threads on the take-up roll covering, because this will render the gripping of the cloth by the covering ineffective and allow the cloth to bag back and the same as mentioned above will result.

(5) The cloth travis. Check the entire cloth travis mechanism and make sure that all parts are properly adjusted and working free of any binding. The cloth roll should be set on exact parallel lines with the take-up roll. If the cloth roll is too low on either end it will sometimes cause the cloth to slip back on the take-up roll and bag at the point of interlacing, and this will result in slack woven selvages.

(6) Tape selvages. Many fabrics are woven with tape selvages, and they are made with a harness motion which works entirely independent of the harness motion which makes the main body of the fabric. Tape selvages are woven in fabrics for various reasons, but as we are not discussing the reasons for them I will skip that, and stick to ways and means of weaving them correctly.

(7) Make sure that both of the tape harness are set properly in relation to the race plate. This setting should be made same as the harness setting for the main body of the fabric. Then turn the crank arm to back center position, all the sheds should be wide open at this point, both tape and regular harness, and be sure that the top shed of the tape harness is in line with the top sheds in the regular harness; then turn the crank arm one complete revolution, throwing the shuttle from end to end of the lay until all four of the tape sheds have been checked and set as mentioned above. There is sufficient means of adjustments provided on the tape treadle arrangement to secure the above mentioned setting, provided there is not excessive wear on some of the tape cam and treadle parts, and in this event the worn parts should be replaced.

The tape cams should be timed and set, on the change, so that the two tape sheds are level at the same point that the sheds in the regular harness are, *this is vitally important.* Very often when using a tape selvage motion the filling yarn will pucker or knee up at the point in the fabric between the tape selvage and the main body, and of course this is an objectionable defect, but if the two settings mentioned above are made it will eliminate this trouble, provided the harness for the main body of the fabric is set correctly. However, in some extreme cases, when a very coarse or open dent reed is being used, it is necessary to draw about two threads from the tape harness through the same dent in the reed with the outside threads of the main body of the warp. Very often when using a tape selvage motion we will have looped filling on the selvage. The loops will vary from one-quarter inch to two

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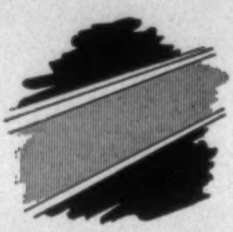

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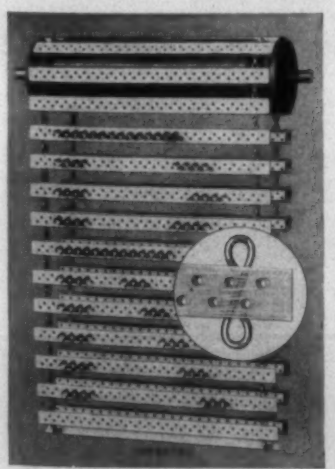

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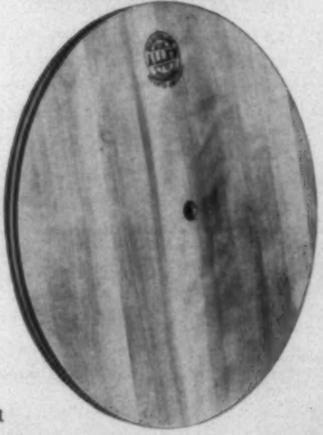

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inches. This almost always occurs on the selvage on the battery end of the loom, because the shuttle has to travel a much greater distance when leaving the battery end before the slack is pulled out of the filling. But if the tape and other harness are properly set, and the shuttle is equipped with sufficient tension on the filling yarn, this trouble will be eliminated.

Broad Woven Goods Output Listed

Rayon broad woven goods production amounted to 425 million linear yards in the fourth quarter of 1951, it is announced by the Bureau of the Census, Department of Commerce. This was three per cent above that of the third quarter but almost one-third less than in the fourth quarter of 1950.

The bureau revealed that a decrease of 14 million linear yards in the 100 per cent filament rayon group was more than offset by an increase in the 100 per cent spun rayon fabric and the combination filament and spun rayon fabric groups of ten and 17 million yards respectively. Nylon fabric production reached a new high of 43 million yards, 12 per cent above the previously recorded high of 39 million yards in the first quarter of 1951.

Machinery in place and active Dec. 29, 1951, follows: spinning spindles—1,205,065 in place Dec. 29 with 1,108,138 active on the first shift, 1,083,694 active on the second shift and 986,397 on the third shift; twisting and throwing spindles—1,645,866 in place and 1,091,848 active on the first shift, 1,071,761 on the second and 1,034,284 on the third; looms—115,839 in place with 98,355 active on the first shift, 92,651 active on the second and 78,338 active on the third shift.

Bulletin On Slasher Room Operation

Minneapolis-Honeywell Regulator Co., Brown Instruments Division, has made available to the industry its most recent literature, Bulletin No. 9306, "Instrumentation for Slasher Room Processes." According to the firm, the bulletin is a guide to slasher room instrumentation that completely summarizes the processes—illustrating photographically and schematically how Brown instruments and Honeywell controls have proved themselves, are proving themselves, and can prove themselves in your mill. Rather than burden the reader with details and technicalities, the firm has tried to catalog the controllable processes, the benefits to be expected from their control, and how to obtain complete information and specifications for the pertinent control system. Bulletin 9306 may be obtained by writing to Minneapolis-Honeywell Regulator Co., Brown Instruments Division, Station 40, Wayne and Windrim Avenues, Philadelphia 44, Pa.

Englishman Praises American Looms

According to *Draper Digest*, published by the Draper Corp., Hopedale, Mass., an official of an English textile machinery firm is quoted as expressing the opinion that weaving standards for today are being set in the best American sheds. The Draper publication quotes E. Cotterill of Courtaulds, Ltd., who stated, in part, in an address at the 1951 conference of the British Textile Institute at Brighton:

"The American makers concede nothing towards making looms attractive or elaborate, their looms are severely practical, simple and refined, chiefly in the sense of utilizing metal to the best advantage, so that American looms appear both light in structure and also ideally adapted for operation at reasonably high speeds. Plainly the expectation is that the loom is part of a logically planned system of cloth manufacture in which the loom plays its part, but in which the warp and weft must break as seldom as possible.

"How far then has orthodox loom design gone? I would suggest that the answer is to be found across the Atlantic for most practical purposes. In the best American sheds the weaving standards for today are being set; yesterday's standards, established on non-automatic looms, may still be good enough in Britain to pass muster in these exceptional times, but they may not suffice tomorrow. On quality alone, a good automatic, backed by intelligent preparation, will beat the best non-automatic loom."

Lengthen Life Of Tobacco Shade Cloth

The service life of cotton cloth used to shade seed beds and growing tobacco plants can be at least tripled by a process developed by the Southern Regional Research Laboratory, Bureau of Agricultural and Industrial Chemistry, in New Orleans, La., the U. S. Department of Agriculture announced recently.

Pieces of test cotton fabrics prepared by this process and used to cover tobacco fields in North Florida during the past three seasons still had two to three times as much of their original strength left as did ordinary tobacco shade cloth after only one season's use.

The weather-resistant finish responsible for this increased life is lead-chromate, an inorganic yellow pigment, which screens out the damaging rays of sunlight, one cause of the rapid deterioration of cotton in outdoor use. The basic principles developed by the Southern Laboratory for applying this treatment to shade cloth have proved to be commercially feasible, and the chemically processed fabric is now available for only a slight increase in cost over the untreated cloth. Since fewer replacements of the treated cloth are required, the resultant saving to tobacco growers will be substantial.

After the laboratory had successfully treated experimental pieces of tobacco shade cloth in its pilot plant in 1948, a private firm treated additional pieces to be tested by Florida tobacco growers. Some of this material was put out as shade cover for tobacco beds in 1949, and at the end of that season had lost only about one-third as much strength as untreated fabrics in the same use. It was used again as top cover in 1950 and 1951—three full seasons—and still retained 40 per cent of its original strength. It probably will last another season. Untreated fabric, on the other hand, served one season as top cover with only part of it suitable for re-use a second season.

Warp Tension Set Mark Eliminator

Among recent patents granted Carolinians, according to Paul B. Eaton, is Patent No. 2,556,055 issued to George F. Bahan of Greenville, S. C., for a warp tension set mark eliminator. This apparatus is designed to prevent the occurrence of set marks in cloth when it is necessary to stop the loom, which set marks are caused by the relaxing of tension in the warp yarns upon stoppage of the loom. This device is designed to maintain tension to overcome this defect.

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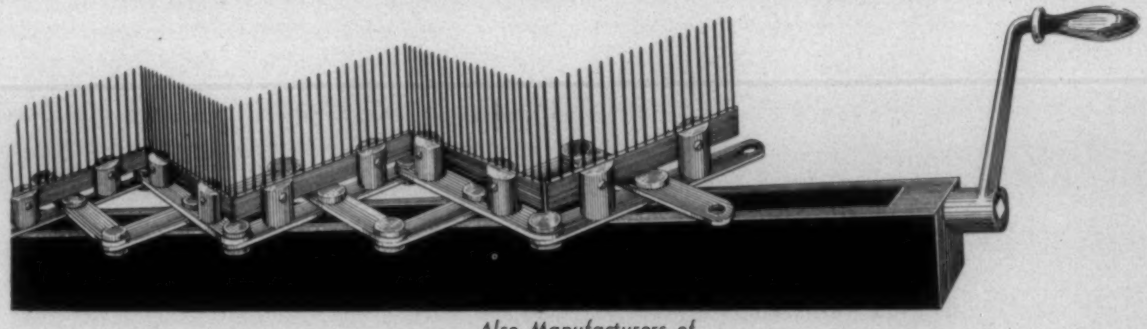

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Bleaching, Dyeing & Finishing

Scouring, Dyeing & Finishing Of X-51

By A. L. PEIKER, American Cyanamid Co.

FOR convenience, this discussion on the dyeing properties of X-51 acrylic fiber will be divided into two parts, namely, (1) staple and (2) continuous filament.

Scouring—One of the important properties of X-51 acrylic staple is the clean whiteness of the fiber itself. It is advisable that all preliminary processing of the fiber be carried out in a manner designed to avoid discoloration. Since X-51 is made from a polymer of acrylonitrile, it has a property that is common with all acrylic fibers, namely, exposure to alkali at high temperatures and for prolonged periods of time will cause yellowing. This yellowing can be prevented by reasonable care in processing, and if yellowing does occur, it can be corrected by subsequent treatments.

X-51 can be subjected to a normal wool scouring procedure to produce a good clean bottom. For example, it has been scoured for 15 minutes in a 30:1 bath containing one per cent soda ash and 0.5 per cent soap at 120° F. to produce a clean white fabric. Temperatures in excess of 140° F. and scouring times in excess of 30 minutes at 120° F. should be avoided. If, however, due to machine stoppages or faulty temperature controls, excessive times or temperatures occur, the original whiteness can be restored by an acid rinse. It has been found that repeated home launderings do not materially change the color of the fiber.

Another general method for scouring X-51 acrylic staple that has produced good results is as follows: The fabrics or yarns are boiled for 15 minutes in a 30:1 bath made up of 0.25 per cent Deceresol OT wetting agent containing 0.1 per cent of glacial acetic acid. Other wetting agents and detergents that have been successfully used in this scouring process are Duponol WA, Nacconol, and Deceresol 22 wetting agent. This procedure will produce a good clean bottom with no yellowing. The time and temperature of processing are not critical, since no changes in the color of X-51 have been noted at any time. A pH range of from 3.5-5.5 is recommended, although a pH up to seven can be tolerated.

Dyeing of Staple

Acetate Dyes—Staple can be dyed with practically all acetate dyes. The dyeing procedure is quite simple. The acetate dyes are dispersed in water alone. The use of dispersing agents, e.g., Duponol WA, soaps, etc., is not recommended. The dyeings should be made at temperatures as close to the boil as is practical. Temperatures below 200° F. should be avoided. At such temperatures, dyeing times of from one to 1½ hours are required.

In general, the dyeing time may be reduced and the fastness properties, at equal depths of shade, improved by increasing the dyeing temperatures. Excellent dyeings have been made in 20 minutes on packages and raw stock in a one-package laboratory machine, under pressure, at temperatures between 230° and 250° F. The depth of shade per unit of dye and fastness properties were improved materially. While this dyeing technique shows real promise, there is one note of caution. The packages must be very soft and evenly wound. As a class, these dyes show good built-up properties and heavy shades can be obtained. At equal depths of shade, the light fastness is about equivalent to that on nylon staple, the fastness to washing is comparable, and the crocking is negligible.

Acid and Direct Dyes—When dealing with most hydrophobic fibers, the classical division between acid and direct dyes is not clearly drawn. Using the so-called "cuprous ion" method, most acid and milling dyes and a surprising number of direct dyes can be applied to X-51 acrylic fiber. A large variety of colors can be obtained in depths ranging from pastels to deep, heavy shades. With care in the quantity of copper sulfate used in the dyeing, bright shades can be produced. In general, the fastness to light, washing, perspiration, and crocking are quite similar to that of the corresponding dyes on wool. To obtain maximum fastness, these dyes must be applied at a good rolling boil.

Since no dyeing assistants such as p-phenylphenol are required, vigorous scouring after dyeing is unnecessary. Rinsing to remove excess surface dye is sufficient. In general, the preferred method for applying acid and direct dyes by the "cuprous ion" method is to first treat the fiber with one to three per cent copper sulfate, followed by three to five per cent hydroxyl ammonium sulfate at the boil for ten minutes. Dyeing is carried out at the boil for 30 minutes, then four per cent sulfuric acid is added, and boiling is continued for an additional 30 minutes to one hour. The fiber is then rinsed well and dried. For maximum fastness the higher quantities of copper sulfate may be required, but for added brilliance of shades, the lower percentages are preferred.

Basic Dyes—The use of basic dyes to color X-51 acrylic staple shows some interesting possibilities. In general, the dyes exhibit the usual brilliance, good wash fastness, good fastness to crocking, and in most cases exhibit rather good light fastness. In the application of basic dyes no assistants or mordants are required. Care in dyeing must be exercised because of the rapid rate of dye exhaustion. This can be controlled by starting the dyeing at low temperatures. The goods are kept at room temperature for about 20 minutes, after which the temperatures of the dye bath is raised gradually to about 160° F. and the dyeing completed.

Vat Dyes—X-51 staple is unique among the acrylic fibers now on the market in that it can be dyed a wide range of shades with vat dyes from an alkaline bath. In common with most of the other fibers, these dyes can be applied also by modifications of the vat-acid methods. These methods are, however, more difficult to control and good end results are somewhat uncertain. The fastness to washing, perspiration, and crocking is excellent. If properly applied, the fastness to light is in the range expected, providing the depth of shade is taken into account. It should be pointed out at this time that there are some anomalies to be found among these dyes. The usual cotton and rayon shade cards and fastness charts should not be relied upon for accurate data as to performance on hydrophobic fibers.

When applying the vats in alkaline baths, the dyes may be applied by either the reduced vat dyeing procedure, or they may be pigmented onto the X-51 and then reduced in the presence of the goods. In dyeing X-51 staple by either the reduced vat method or the pigmentation method the concentration of caustic soda and hydrosulfite should not exceed one ounce per gallon and 1¼ ounces per gallon, respectively. The dyeing should be started cold, and temperatures above 160° F. should be avoided. Since prolonged exposure to caustic at high temperatures will cause some discoloration of X-51 staple, the oxidation of the vat dye should be carried out at room temperature with hydrogen peroxide and acetic acid. The finishing is carried out at the boil with acetic acid and Duponol WA.

Soluble Vat Dyes—Light to medium shades can be produced on X-51 acrylic staple by means of the soluble leuco ester vat dyes. In view of the ease with which X-51 staple can be dyed by the regular vat dyes, the use of the more expensive soluble vats may be somewhat restricted. In the case of certain blends of other fibers with X-51, the soluble vats may show some advantages. Each blend, however, is a study in itself.

Filament

The dyeing properties of X-51 continuous filament acrylic fiber differ materially from the dyeing properties of X-51 staple. The principal difference is the depth of shades obtainable. The continuous filament can be dyed by the following classes of dyes: acetate, acid and direct, basic, vat, and soluble vat. Before discussing the dyeing of X-51 acrylic filament, it must be pointed out that the statements that will be made are based on fewer dyeing experiments than was the case with the staple fiber. To date, less filament yarn has been available for study.

Scouring—The most efficient scouring method that has been devised to date for X-51 continuous filament is to boil the fabric 15-30 minutes in a solution containing 0.25 per cent Deceresol OT wetting agent and 0.1 per cent glacial acetic acid.

Acetate Dyes—At the present state of knowledge, the acetate dyes show the most promise for dyeing continuous filament. The build-up in depth of shade, except at temperatures above the boil, is not quite so good as the build-up on the staple. At the boil, light to medium shades can be produced. At temperatures of 240-250° F., heavy shades can be obtained. In general, the fastness of these dyes on continuous filament are better than the fastness on X-51 staple and are about equal to the fastness on acetate filament. This statement holds true for fastness to light, washing, perspiration, and crocking. The fastness to gas fading appears to be better on X-51 than on acetate. Some dyes do, however, show color changes when subjected to the usual gas-fading test.

The depth of shade, per unit weight of dye in the dyebath, and the fastness properties obtained at equal depth of shade are improved appreciably by an increase in dyeing temperatures. The dyeing procedure is the same as that described under the section on the staple fiber.

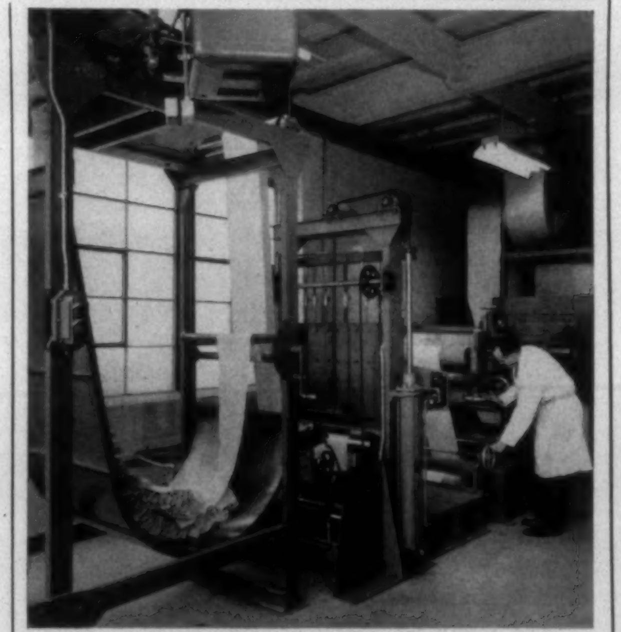
Acid and Direct Dyes—Here again no clear-cut distinction can be made between acid and direct dyes. A great many of the dyes from these two classes can be applied to X-51 using the "cuprous ion" method. The dyeing procedure is similar to that described previously.

For continuous filament, the build-up of these dyes is not so good as with the staple fiber. Light to medium shades can be produced. The fastness properties of continuous filament colored by these dyes are about the same as those for the staple at equivalent depths of shade.

Basic Dyes—Basic dyes will produce some interesting shades on X-51 continuous filament. Since these dyes exhaust very rapidly and don't seem to move after they are applied, a careful control of the initial dyeing temperatures is advisable. The technique of dyeing is the same as that recommended for staple. Heavy shades are not advocated because of the possibility of crocking. Light to medium shades do not crock excessively. The other fastness properties are better than would be expected for these dyes on the more conventional fibers.

Vat Dyes—X-51 continuous filament, in contradistinction to the staple fiber, cannot be dyed with vat dyes from an alkaline bath. Light to medium shades can be produced by applying these dyes by a modified vat-acid method. The fastness to washing, perspiration, and dry cleaning is excellent. The light fastness is also outstanding. At the present time, however, dyeing costs will be rather high. In spite of the expected high cost, this method of dyeing may find a place for certain end uses of filament yarns.

Soluble Vat Dyes—Light to medium shades can be pro-



A NEW WEB COATING RESEARCH LABORATORY was opened recently at Cleveland, Ohio, by Industrial Ovens, Inc. Staffed by an experienced group of chemical and mechanical engineers, the laboratory is equipped with a complete pilot plant coating unit to process textiles through all methods of coating and impregnating. Industrial Ovens designs, manufactures and installs continuous materials handling and processing systems—with the engineered application of heat—for the textile finishing industry.

duced by applying soluble vat dyes from a sulfide acid bath to X-51 continuous filament. The fastness properties of the dyed material are very similar to those obtained by dyeing with vat dyes. Here again, the dye costs will be rather high.

Blends—We have accumulated a great deal of information on dyeing X-51 acrylic fiber and are constantly learning newer, better, and easier ways. With this background of information, we have a headstart and are actively investigating the dyeing of X-51 in blends. We feel that for all synthetic staples, blends will continue to become of increasing importance.

May I conclude with a plea on behalf of the dyer? It is addressed to everyone who works with the newer synthetic fibers, X-51 and any others. When selecting your fibers for making blended fabrics, won't you please keep the dyer in mind and not ask for the impossible? In making this plea I am fully aware that what appears to be impossible today may be possible next year or even next month. With this in mind, the research and application laboratories such as ours in Bound Brook, welcome experimental fabrics of all kinds. But, until the entire industry has learned a great deal more about dyeing fibers which compete with one another for dyes, the dyer will often be placed in a very awkward situation.

Dr. Peiker's paper was one of those delivered March 5 in New York City before the American Association of Textile Technologists.

Improved Continuous Drying Through Use Of Air Nozzles

By LEO WALTER, Consulting Engineer

THE design of continuous textile dryers has made great progress between the two wars, and recent developments aim at fully automatic operation at highest possible efficiency. A few design points should be briefly described in the following, mainly with a view of stimulating either the reconstruction of existing less efficient dryers, or their replacement by more modern drying apparatus.

The textile plant engineer, who is confronted with the task to examine a hot air dryer for efficiency requires (a) measuring instruments for testing dryer performance, such as anemometers or air speed meters for checking air velocities at various points. A steam meter or a reliable meter for condensate for ascertaining steam consumption at different loads, and for different types of goods. Precision thermometers for checking air temperatures at inlet, at outlet, and at intermediate points. A hygrometer for checking relative humidity of outlet air, and of re-circulation air, where present. These instruments may be on loan only, or an expert should be entrusted with measurements. (b) After these and other data have been performed, a good knowledge of the basic drying theory is required to take the right conclusions. (c) In case it has been decided to reconstruct, it will be wise to entrust a specialized high-class firm with rebuilding of the dryer. This needs not necessarily be the original supplier of the apparatus, and a more advanced firm might be found. (d) It may be that reconstruction can be performed, if not too extensive, in the mill's shop.

In the following, a few modern American textile dryer types will be illustrated and briefly described for the purpose to show how the method of air impingement is used for acceleration of moisture removal from the fibers. The wider use of multiple-air nozzles, which by the way is covered by American patents and cannot be indiscriminately applied, is of the most recent and efficient improvements in textile dryer design. The intimate and vigorous contact of the hot air with the fabric accelerates the rate of drying, and at the same time takes away the eliminated vapors much quicker than any other type of air movement. The dryer types shown, and similiar others, deserve earnest consideration when attempting more efficient drying methods.

Fig. 1 illustrates a side elevation of an impact type dryer, whereby the air is circulated through the bed of continuously moving stock. In this design the warm air is impinged against the bed at high velocity, as the stock moves on a woven wire or perforated metal conveyor. A multitude of air nozzles produce a peculiar compression beneath each jet of nozzles, and expansion in the space in between. This method permits air circulation all the way through the bed of material, with resultant rapid and uniform drying. It is possible with this multi-fan type of conveyor dryer to vary air temperature, as the stock moves along by individual temperature control heating elements, and thus achieve a desired time-temperature curve, which can be modified according to the material to be dried. The "breathing" action achieved is a notable feature. Fig. 2 illustrates a single run tenter, using higher air temperatures for impingement through nozzles against both sides of the fabric, as it is carried through the drying chambers. This air penetrates through the cloth, and it is claimed that very uniform drying and big output can be achieved. Moisture control is performed by proportioning recirculation and admixture of fresh air to avoid harsh effects on the cloth in spite of rapid drying. Automatic control is applicable to machine speed, air temperature, and air velocity, and humidity can be altered at will. This drying system is recommended for drying of fabrics before curing, and is used in addition for fabrics which must be held to width for many applications.

Loop dryers and curers (Fig. 3) of rugged design, having large scale output combined with quality finish use recently higher temperatures for curing resin-treated fabrics. Quick and efficient formation of the loops by means of air insure uniform loops. Air movement is produced by a series of air nozzles which direct the hot air vertically

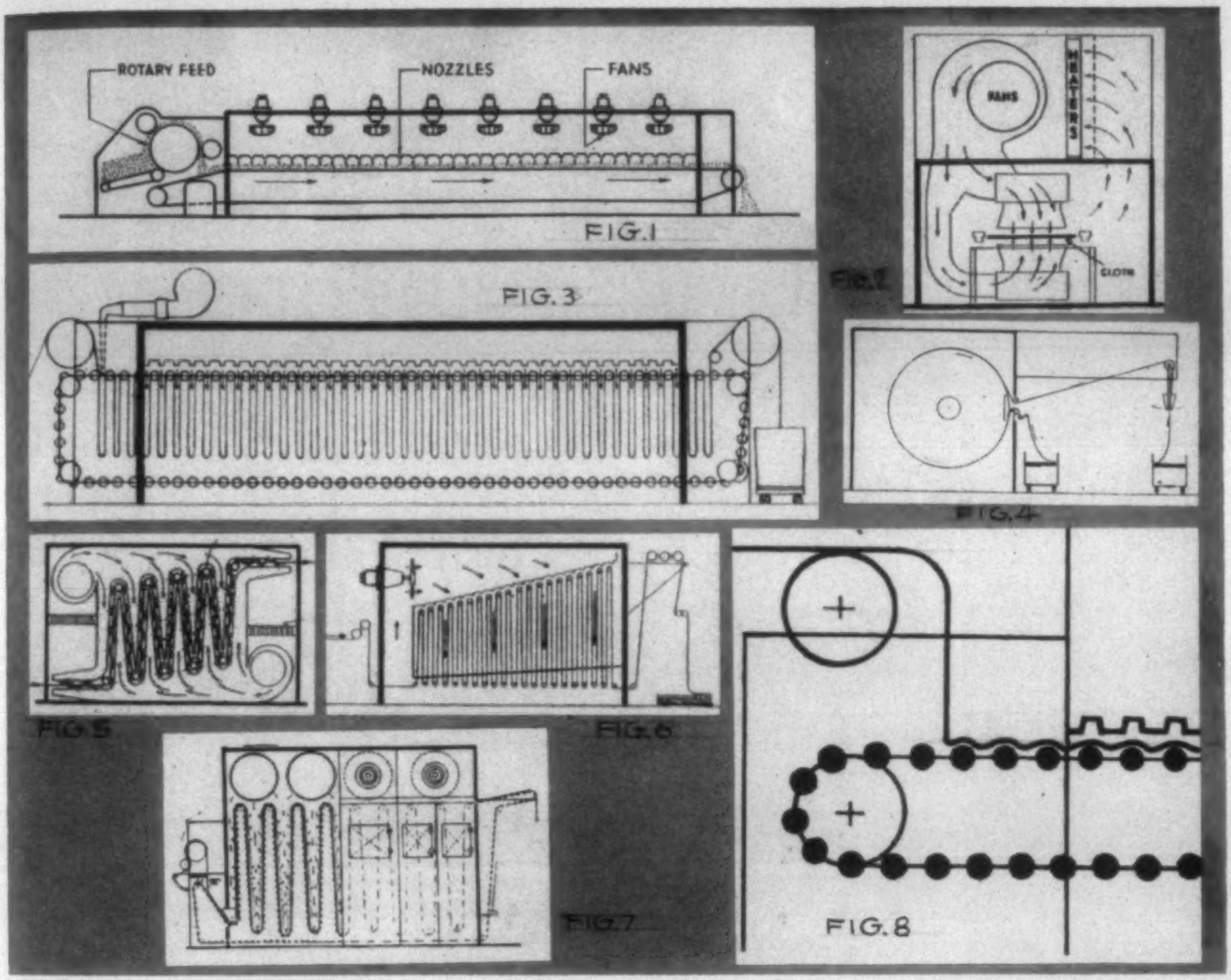


***Fig. 1*, conveyor dryer with "breathing" stock. *Fig. 2*, single-run tenter with air nozzles blowing on both sides of cloth. *Fig. 3*, loop dryer and curer. *Fig. 4*, suction cylinder dryer. *Fig. 5*, roller dryer with motor-driven rolls. *Fig. 6*, modern roller curer for resin-treated fabrics. *Fig. 7*, multipass airlay dryer. *Fig. 8*, slack dryer for shrinkage range on dyed goods.**

downwards, thus subjecting both sides of the loops to treatment by the air, which is recirculated. Re-heating and admixture of fresh air enable desired temperature and humidity conditions.

Fig. 4 illustrates the working principle of a dryer for tricot fabrics, and for silk and rayon prints. Cloth is held against a scrim cloth covered surface of a perforated cylinder. This is performed by a holding-down blanket of open mesh, and air flows through the cloth in the cylinder. Adjustable discs inside the cylinder force the air to flow, as desired. Means for reversal enable quick extraction of goods which are imperfect. Feeding and delivery is performed at the same side of the machine. It is claimed that drying time after printing can be greatly cut down. A modern roller dryer is illustrated in Fig. 5, and the machine was designed for drying piece goods in the place of drying cylinders or cans. For drying of dyed fabrics before developing, and for drying of synthetic fabrics the design seems to be suited due to its no-stretch features. A special motor varies automatically its speed according to the tension of the cloth, and shrinkage is compensated. Fig. 6, illustrates a "roller-curer" for resin-treated or for lightweight materials, such as curtains, marquisettes and similar weaves. High temperature plus short time curing at about 350° F. for one to four minutes produced good output. An interesting drying machine in finishing is the multi-pass airlay dryer, as shown in Fig. 7. A conveyor equipped with cork-faced supporting grits carries the material and travels up-and-downwards. The pressure differential between adjacent air pockets holds the material gently against the grits, so that air not only dries, but also carries the fabric.

For dyed goods to be shrunk in both the warp and filling, the material is "overfed" to the dryer, and deposited on top of the upper conveyor. Three endless chain conveyors, one of which is shown diagrammatically in Fig. 8, are located in the apparatus, and cross grits, covered with cork sleeves join the chains. The material rests loosely on these narrowly spaced grits, and hot air at high velocity is impinged against the fabric during its passage. It enters at the top conveyor, and leaves at the bottom conveyor in shrunk condition.

In conclusion the writer would like to acknowledge the assistance of Proctor & Schwartz, Inc., of Philadelphia in compiling this brief survey by giving permission to use its designs and illustrations.

A new Instrumentation Data Sheet 8.4-1, describing the equipment, purpose and benefits of controlling nylon heat setting processes has been made available by Minneapolis-Honeywell Regulator Co., Brown Instruments Division. This data sheet describes control for a gas-fired unit, with qualifications of its adaptability to other machines using the same or different heating mediums.

Maintenance, Engineering & Handling

Mill's Power Converted From 440 To 550 Volts

By JAMES T. MEADOR

Registered Engineer

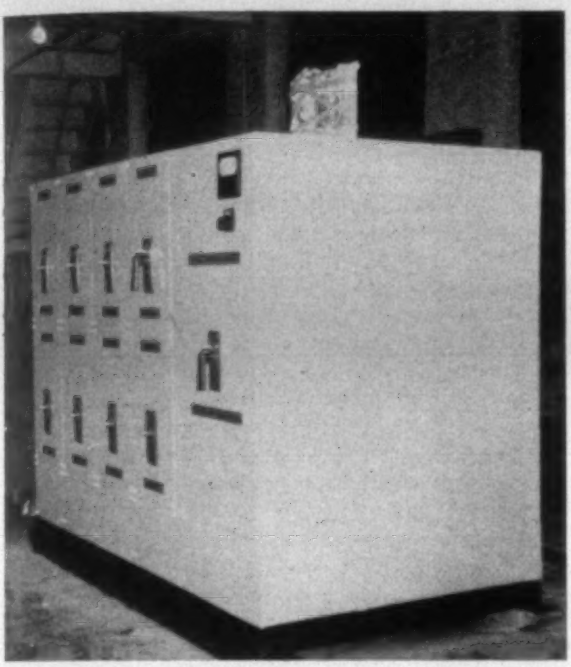
THIS is a subject that is generally treated with a great deal of doubt, and with many variations of ideas about its accomplishment. There are usually many kinds of questions concerning these ideas and their applications in actually getting the change-over made and completed, and they are, generally: 1. *What is involved in such a change-over?* 2. *What is the order of procedure on such a job?* 3. *What is the problem if you are buying primary power (2400 volts, 3 Phase, or 4160 volts, 3 Phase, 4 Wire, "Y" connected) and using your own transformers?* 4. *What is the problem if you are buying secondary power (440 volts, 3 Phase) directly from the power company?* 5. *What is the long-run consideration in favor of such a change-over?*

To get along with this discussion, let's take the first question for an examination, "What is involved in such a change-over?" First, consider the things that will not require any changing; these are your motors and wiring and conduit lines, also your safety switches and fuses, except in "border line" cases where the fuses might on 550-volt power become too high in rating, or, putting it in another way, the fuses might become higher than necessary on 550 volts. Generally speaking, this is a very minor consideration upon which little is ever done. The main considerations, involve a survey of the whole plant "with a fine-toothed comb" in order to get the full name-plate data on all magnetic starters, solenoid brakes, belt-shifters, relays, instruments and their potential transformers, rectifiers, pilot lights, ground detectors and lighting transformers, as well as compensators, in which you cannot afford to take for granted that all the holding coils will be alike in a similar group of starters, nor that the coils in the solenoid brakes will all be similar, nor especially that the coils in the belt-shifters will all be the same, inasmuch as there are several variations of all of these units, as well as others, and as it is vitally necessary to the effectiveness and success of this conversion that all replacement units are correctly ordered and on hand when the time comes for it to be made, which for the average mill is over some week-end period, which puts the plant in shape for full production at the beginning of the next week. The other consideration on this question is that of the power supply change-over, which is relatively simple if you are buying low-voltage or secondary power from the power company who are making the exchange of transformers in order to deliver 550-volt power to your plant, which we'll discuss more later on.

The next question, "What is the order of procedure" ties in both your plant and the power supply services, along with the fact that after your plant has been surveyed thoroughly for all possible coils and other 440-volt items of similar nature, and all of the 550-volt replacements have been ordered *and are on hand,* each and every 550-volt replacement element should be individually tagged with a small shipping tag or a large price tag, on which the full name-plate data along with coil number and the machine name or number and its department is plainly printed or lettered, and attached by means of some small, light gauge wire which will permit the tag to be attached to the starter in which its coil was installed as a replacement. This gives the person making the replacement a positive check on which starters have had the 550-volt replacement made. Thus, any starter without a tag on the outside, handle, conduit, etc., is a starter needing a replacement coil of 550-volt rating. Then, too, with each 550-volt part being tagged, they cannot get lost among the untagged 440-volt coils which have been taken out.

If the power company is to make the transformer exchange, be sure that your local manager "knows the score" and his crews are all lined up for this job at the appointed time. On the other hand, if you are buying primary power, or, are generating it, the transformer change-over then becomes your own concern, whereupon it is up to you to make that yourself, allowing plenty of time for the work as well as having material as may be needed for primary and secondary connections with some spare connectors of the solderless, U-bolt type with bronze hex-head nuts and bolts and lock washers, inasmuch as all too often when such a job is done, the connections at either or both of the bus bars or the transformer terminals are found to be unsuited for the new job of connecting the 550-volt transformers into the circuit.

Question No. 3, "What if you are buying primary power" ties in with the above paragraph, which might be extended to take in still more territory by taking into consideration the capacity and insulating characteristics of your 550-volt replacement transformers in case they should be used on the 4,160-volt, three-phase, four-wire, "Y" system. If you are going to use only 2,400-volt primary power, then the transformer is not so critical. But, to follow through and answer our question, just get your men and heavy rigging out to the transformer sub-station and get the work started, for it will take several hours for completion of this par-



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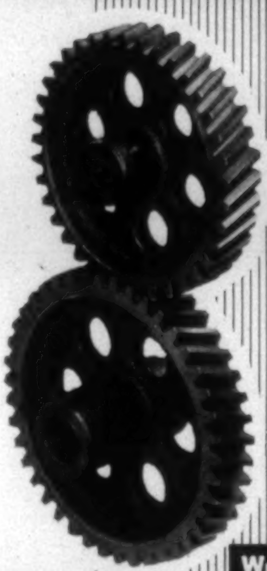

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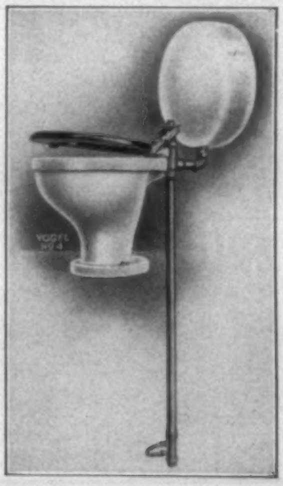

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ticular phase of the work. At the same time let the replacement of the coils, etc., in the mill be proceeding without loss of time!

At this same time, it will be necessary to go to your switchboard and remove all the 440-volt to 110-volt instrument potential transformers and replace them with the 550-volt to 110-volt transformers, and at the same time replace the dial on your voltmeters with new dials calibrated for 0 to 750 volts. Wattmeter dials should be changed in view of the increased voltage on the system. This method of buying primary power allows you to set your own transformers on either high or low taps whenever you please, so that you could obtain a low secondary voltage in order to reduce the tension of the 440-volt motors, etc., which we will discuss a little later at full length.

The fourth question does not require much consideration other than a full and complete understanding with your power company for its bank of transformers to be changed to deliver your 550-volt power on the day and at the time of your change-over, so that there may be no kind of misunderstanding regarding your requirements. You will find them glad to co-operate with you.

Question No. 5, regarding the long-run advantages of such a change-over, may have many answers from many people, but, some of them are: uniformity or standardization of electrical equipment with the textile industry in general is very desirable, making repairs or replacements easier to get; also, the higher voltage permits better circuit efficiencies, with less voltage drop, etc., and, if you have a plant where both 440 and 550 volts are being used, you'll find that such a change-over to a single voltage is also profitable in that you'll have a reduction in expense on your power system and equipment.

Now, after all of this prolonged talk, let's discuss two actual cases of such change-overs; one where the power is supplied on the primary, and one with the power being supplied at the secondary voltage of 550 volts.

The first, with primary power being supplied at 2,400 volts, three-phase, three wires (soon to be supplied on three-phase, four-wire, "Y" system at 4,160 volts, which we will discuss in a later issue) was very recently completed without a hitch. The mill had both 440 and 550-volt secondary power which had been in service for many years, and recently it had become necessary to go to all 550-volt power. The survey was made, and the requirements of coils, instrument transformers, dials, etc., were assmbled, along with a larger bank of 550-volt power transformers, for installation on a certain date, at which time a group of about 35 men went to work to make a complete change-over in one week-end period from 11:00 p. m. Saturday to 11:00 p.m. Sunday. The holding coils on all magnetic starters were changed to 550 volts, as were those on all compensator starters (the auto-transformer coils were not changed), the instrument transformers were exchanged and re-connected, and the voltmeter and wattmeter dials changed, the belt shifter solenoid coils were exchanged, as were the pilot light transformers.

When the 550-volt baling press brake coils were installed, it was found that the voltage (with the new, 550-volt power transformers set on the lowest taps, giving 510 volts) was too low for good snap-action operation, so, the original 440-volt coils (found to be 480-volt rating) were replaced on the brakes, with perfect results and performance. None of the motors were rewound, and all are operating at the 510 volts supply in good order and without any indication of overheating or burning out, which condition should continue for an indefinite period of time without trouble.

The other case is that of a mill having had in use for some time an oil-engine generator delivering power at 440 volts for a part of the mill, while the remainder of the plant was water-wheel driven. Later, it was desired to put the mill entirely on electric power, with 550 volts being determined as the rated power voltage, with the 440 volt part of the mill to be changed over to 550 volts. The same survey and procedure was followed with gratifying results, with the power company supplying secondary power at 575 volts (which is much higher than in the first case). Here, too, there have been no motor burn-outs directly due to the change-over of voltage.

It is hoped that the above experiences by two separate mills will be of some benefit to some of you who are contemplating such a change-over. Don't forget that next time we will discuss the three-phase, four-wire, "Y" power system, with its advantages.

"We're partners—I run the business and he fills out the O.P.S. and N.P.A. forms."

Pulsation In Centrifugal Blowers

When a centrifugal blower is used in the capacity range for which it was designed, pulsation is seldom a problem. There are, however, certain applications of blowers—where it is necessary to keep the blower running during periods of very small demand. In the case of certain heating processes these "turn-down" or "weekend holding" periods may call for as little as ten or 20 per cent of rated volume output of the blower. In such cases, surging can set up a pulsation which may disturb the process and cause overheating and consequent damage.

Such pulsation can be prevented—and corrected—if one understands the mechanics of pulsation and the characteristics of a centrifugal blower, as interpreted by O. W. Acheson, Billmyre blower division, Lamson Corp., Syracuse, N. Y.

The frequency and intensity of surging depends upon: (1) the slope of the pressure-vs-volume curve, (2) the rate at which air is being removed from the system, and (3) the volume of the pipe system to which the blower is delivering air. The same principles apply whether the centrifugal unit is operating as a blower or an exhauster. The wisest action to take in the prevention of pulsation is the anticipation of circumstances which might cause it. If the application is such that low turn-downs are expected, it is prudent to so indicate when the blower is being ordered. The blower manufacturer, can in most cases, select and specify to prevent pulsation.

If, however, pulsation or surging is noticed in a finished installation, any of the following four steps can be taken:

(1) Consider the economics of replacing the blower with a smaller capacity unit having a consequently lower surge point.

(2) Consider purchasing a small capacity unit for turn-down periods.

(3) Make sure that the amount of air delivered by the blower is always above the surge point by bleeding enough air out of the system beyond the blower. If you are handling gas rather than air it will be necessary to re-circulate this bleed flow back into the blower inlet. If you re-circulate the bleed, however, remember that you are compressing and re-compressing that portion of the gas and building up the blower temperature to a point which may be detrimental.

(4) If the surging is infrequent and of short duration, it may not be harmful to the blower at all. Surging at the point of air or gas use may be eliminated by adding a surge tank or increasing the cubical content of the piping in front of the nozzle.

(5) Ask the manufacturer to make minor changes in the blower design to permit by-passing of the air, or take other steps which will eliminate the troublesome pulsation at the sacrifice of a little blower efficiency or tightness of the installation.

Actually, the more efficient a blower operates and the tighter the air system is beyond the blower, the more likely it is to surge at very low operating points. Fortunately, the uses for compressed air or gas, which demand blower operation at critically low output, are infrequent so that the use of high-efficiency equipment can be used in all but the rarest of cases.

Cite Value Of Petroleum In Textiles

Petroleum, which means heat and motor fuel to most Americans, plays an important part in the clothes we wear. In high-speed mass production oil lubricates the actual textile fibers, as well as machinery. It also is involved in certain finishing processes, and, as a raw material, helps build many of today's man-made fabrics.

Petroleum's multiple role in textile manufacturing is featured in an article appearing in a recent issue of *The Flying Red Horse,* magazine published by Socony-Vacuum Oil Co., Inc. Entitled "Oil Spins a Good Yarn," it describes some of the steps taken in processing woolens, worsteds, cottons and synthetics.

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PERSONAL NEWS

James F. Allen has been appointed sales representative for the industrial chemicals division of American Cyanamid Co. Mr. Allen will make his home in Baton Rouge, La. He will cover the state of Louisiana and the southern half of Mississippi and Arkansas. Mr. Allen attended Phillips Academy, Andover, Mass., and Yale University, graduating in 1942 with a B.S. degree in chemistry. During World War II he served four years in the Navy with two years of duty in the South Pacific. Upon release from the Navy he was associated with Devoe & Reynolds Co., Inc., until joining Cyanamid two years ago. Prior to his present assignment he handled technical service work in connection with several of Cyanamid's synthetic organic nitrogen compounds.

John L. Morgan, Jr., has been promoted from superintendent of Stanley (N. C.) Mills and general superintendent of Ragan (N. C.) Spinning Co. to assistant general manager of both plants, both of which are divisions of J. P. Stevens & Co., Inc. Mr. Morgan is a graduate of N. C. State College and joined Stanley Mills in 1946 shortly after his release from the armed forces. . . . Ralph P. Sullivan has been promoted from superintendent of the worsted department to the office formerly held by Mr. Morgan. Mr. Sullivan is a graduate of Clemson College. His first job was with the Slater (S. C.) Division of Stevens and he was transferred to Stanley from there.

Robert Gurney, president of Gastonia (N. C.) Combed Yarn Corp., last month contributed $50,000 to the United Jewish Appeal Fund, which will be used to aid the new state of Israel, distressed Jews overseas and refugees entering the United States. In recognition of Mr. Gurney's philanthropies and services to the new Middle East democracy, he was awarded a plaque at a State of Israel dinner in Raleigh, N. C., March 16.

Richard V. McPhail of the textile supply firm of Watson & Desmond, Charlotte, N. C., is directing the activities of over 200 volunteer workers in Gastonia, N. C., this month during the annual Red Cross fund drive.

Fred Lyon has been elected president of Micolas Cotton Mills and Opp Cotton Mills, Opp, Ala., succeeding Mrs. C. W. Mizell who was named chairman of the board of directors. Mrs. Mizell had served as president of the plants since the death of her husband, who she succeeded as president. Mr. Lyon has been employed by the mills since 1934 and has served the company through all phases of its operations.

Dr. Gilman S. Hooper has been appointed manager of high polymer research for Industrial Rayon Corp., Cleveland, Ohio. Dr. Hooper, who joined the company's high polymer research staff in February, 1949, and has been assistant manager of high polymer research for the past year, succeeds Dr. Herman A. Bruson, who has resigned. For the preceding 15 years Dr. Hooper was associated with E. I. du Pont de Nemours & Co. in the acetate division of the rayon department.

James Y. Rogers, Jr., since 1946 associated with James E. Taylor & Co. of Charlotte, N. C., Southern representative of Houghton Top Co., Boston, Mass., has left that firm to join John L. Stickley, yarn and wool top selling agent of Charlotte, as sales representative. Mr. Stickley is Southern sales representative for William Whitman Co., Boston; Spun Fibers, Inc., Lenoir, N. C.; Profile Cotton Mills, Jacksonville, Ala.; and is sales representative for the synthetic yarn production of Peerless Woolen Mills, Rossville, Ga. John L. Stickley Co., as the result of a recent arrangement, will now represent the Boston firm of Nichols & Co., manufacturer of worsted top as well as tops produced from man-made fibers such as nylon, Dacron, Orlon, etc.

Appointment of two members of the dyestuffs division to new sales posts was anonunced recently by Du Pont's organic chemicals department: C. Harrell Asbury was named assistant manager, domestic sales, and Kenneth C. Johnson was named manager, textiles section. Mr. Asbury started with Du Pont in 1934 as a dye tester in the company's dye laboratory at Charlotte, N. C., and Mr. Johnson started with Du Pont in 1937 as a research chemist in the miscellaneous colors division of the Jackson laboratory at Deepwater Point, N. J.

Dr. Fred J. Emmerich, president of Allied Chemical & Dye Corp., has been named as the recipient of the 1952 gold medal of the American Institute of Chemists which will be presented to him at the close of the 29th annual meeting of the institute May 7-8. He is being awarded the medal because of his achievements "as a business leader devoted to building the chemical industry by fostering co-operation among men skilled in chemistry, engineering and commerce."

Dr. Albert F. Smith has been appointed director of the Carothers research laboratory of the textile fibers department of E. I. du Pont de Nemours & Co., Inc. The laboratory, located at the company's experimental station at Wilmington, Del., conducts a major portion of the research on nylon and Dacron polyester fiber. . . . Dr. Charles H. Arrington, Jr., with Du Pont since 1949, succeeds Dr. Smith as a research supervisor in the chemical department at the station.

W. S. Kumblad, Socony-Vacuum Oil Co., Inc., has been transferred to the company's New York office, 26 Broadway, as headquarters staff engineer for Socony-Vacuum process products used by the textile and paper industries. Mr. Kumblad formerly served in the Boston office as process products representative for New England. In his new duties he replaces W. A. Beman who is now in charge of the company's chemical products section.

William J. Carlin, formerly associated with E. F. Drew & Co., has joined the sales staff of W. C. Hardesty Co., Inc., and will sell Hardesty's complete line of fatty acids in the Middle Atlantic states.

Miles Sampson has joined the engineering force at Mount Hope Machinery Co., Taunton, Mass. Mr. Sampson was associated with Mount Hope Finishing Co., Dighton, Mass., until the finishing plant closed down recently. He has also been associated with Howard & Bullough, Amoskeag Mfg. Co., Hind & Harrison Plush Co., American Printing Co. and Andrews & Goodrich Co.

William N. Dulaney *(left)*, since 1940 a representative of the A. E. Staley Mfg. Co. industrial sales department, has been named manager of the Southeastern sales office at Atlanta, Ga. Mr. Dulaney is a graduate of Georgia Tech with a degree in textile engineering. He succeeds William H. Randolph, Jr., who continues with the company as a sales consultant in the Southeastern territory. . . . Daniel S. Miller, who has been supervisor for the company's package sales department

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in the Atlanta area, has been named assistant manager of the Southeastern sales office in charge of package sales. Mr. Miller joined the Staley company in 1934.

Donald Comer of Birmingham, Ala., chairman of the executive committee of Avondale Mills, last month stated that he planned to run for the electoral college without taking a loyalty pledge to the National Democratic Party. Mr. Comer was quoted as saying he is a States Righter and has no intention of pledging himself in advance to a presidential nominee of the National Democratic Convention.

William C. Dobbins has been promoted from second hand in the weave room to overseer of the cloth room at Jackson Mills, Wellford, S. C., and E. C. King has been promoted from loom fixer-instructor to second hand. Both men attended study courses offered as part of Jackson's training program.

John G. Bannister, manager of the Oakland, Calif., division of National Automotive Fibres, Inc., Detroit, Mich., has been appointed vice-president in charge of manufacturing for the company's 12 divisions. He joined the company in 1938 as a clerk in the Oakland plant.

Elliott W. Springs, president of Springs Cotton Mills, Lancaster, S. C., recently resigned as wing commander of the South Carolina Civil Air Patrol to accept a position on the national advisory board of the C.A.P.

J. B. Adams has joined R. E. L. Holt, Jr., and Associates, Inc., manufacturers' representatives of Greensboro, N. C. Formerly with Greenwood Mills as overseer of weaving at the Mathews Plant, Mr. Adams' territory will include western South Carolina and Georgia. As salesman for the R. E. L. Holt, Jr., organization Mr. Adams will represent Dixon Lubricating Saddle Co., the Ellison Co., Hayes Industries, Inc., Industrial Dryer Corp., Glover Wood Turning Co., Pavia Shuttle Co., Plasticbilt Corp., Rice Dobby Chain Co., Southern Steel Stampings, Inc., Southern Weaving Co., B. Snowiss Fur Co., Ton-Tex Corp., and Mitchell-Bissell Co.

Charles J. Lloyd of Bristol, Va., has succeeded John D. Jones, Jr., as overseer of weaving on the third shift at Seminole Mills, Statesville, N. C.

Louis L. Jones, president and treasurer of Canton (Ga.) Cotton Mills, has been elected a director of the Citizens & Southern National Bank, Atlanta, Ga. Mr. Jones is a director of the Cotton Manufacturers Association of Georgia and served as president of the association in 1933 and 1934.

Recent personnel changes in the Abney Mills group of plants in South Carolina include: A. L. Bannister appointed superintendent of the Panola Plant at Greenwood succeeding the late H. E. Seigler; F. M. Wiley, transferred from the Poinsett Plant at Greenville to become superintendent of the Grendel Plant at Greenwood; and Claude Malley, transferred from Abney's Woodruff Plant to become superintendent at Poinsett.

Harry C. Templeton has been named vice-president in charge of all production for Botany Mills, Inc., New York. He also will serve as assistant to the president of Botany, Col. Charles F. H. Johnson. Mr. Templeton has been general superintendent of Botany for the past eight years. Prior to that he was resident manager of the American Woolen Co. mills at Maynard, Mass., and was associated in an executive capacity with the New York selling offices of the company. Also he was at one time in charge of production in the wool textile division of A. D. Juilliard & Co.

Dr. Robert L. Johnson has joined Dow Chemical Co.'s biochemical research department in Midland, Mich. He is working in the microbiological laboratory which specializes in the use of chemical compounds to combat microbial deterioration of industrial products. Dr. Johnson received his A.B. degree in science from Wabash College, Crawfordsville, Ind., in 1942. He served with the U. S. Army Medical Corps from 1942 to 1946. After a year as analyst for the Carnegie-Illinois Steel Corp., he entered graduate school at Purdue University. Here he received his Ph.D. degree in mycology in 1951.

M. H. McDowell, in charge of procurement for the Chemstrand Corp. nylon plant being designed by E. I. du Pont de Nemours & Co., Inc., Wilmington, Del., and who has been located in that city, arrived in Pensacola, Fla., recently to supervise these activities at that point. Mr. McDowell will make his office at the plant construction site. He will work under the direction of Roy G. Hemminghaus, nylon plant manager for the Chemstrand Corp. Meanwhile, S. William Ginther, who has been a procurement co-ordinator on the company's Acrilan project at Decatur, Ala., has been transferred to the Wilmington offices to assist Mr. McDowell from that point. . . . F. William Koster, plant manager and secretary for Chemstrand, announced recently appointment of three production supervisors for the Acrilan manufacturing plant. They are Cole Downing, Robert J. Larson, and Adin A. Nellis, Jr. All have moved to Decatur, Ala., and have assumed their new assignments. . . . Jack Davis has resigned his position as assistant director of the research division at Callaway Mills Co., LaGrange, Ga., to join Chemstrand's research and development department. Mr. Davis had been associated with Callaway for 12 years.

Wilbur Owens, formerly of St. Pauls, N. C., has joined American Yarn & Processing Co., Mt. Holly, N. C., as night overseer of its Adrian Plant.

C. A. Fox retired last month as general superintendent of the American Thread Co. plant at Troutman, N. C., ending a career of 60 years in the textile industry. He began his career at the age of nine in the old Reinhardt Mill at Stanley, N. C. He has long enjoyed the reputation of being an excellent textile manufacturer and yarns produced at the Troutman plant became known throughout the trade as fine yarns of high quality. . . . Robert Pully, who has been assistant superintendent, was named superintendent to succeed Mr. Fox.

OBITUARIES

Percival C. Blackmon, Sr., 72, associated with Rock Hill (S. C.) Printing & Finishing Co. until his retirement from active business several years ago, died March 3. Surviving are his wife, two sons, a daughter, a brother and a sister.

Dean Asa Cabot, 61, for the past two years chief development engineer at Whitin Machine Works, Whitinsville, Mass., died suddenly last month in Framingham, Mass. Before joining Whitin he held a similar position with H & B American Machine Co. and prior to that was for 15 years chief engineer of the Saco, Me., plant of Saco-Lowell Shops. Surviving are his wife, two sons, a daughter and a brother.

Thomas F. Cuddy, 79, long associated in the textile industry, died Feb. 22 at a hospital in Charlotte, N. C. Mr. Cuddy, a native of New Bedford, Mass., had lived in the South since about 1900 when he came to this area to supervise the installation of some of the first textile mills in the Carolinas and Alabama. He was a former general superintendent of the Mohawk Sheeting Mills and of mills in Welland, Ontario, and Utica, N. Y., and was associated with the American Yarn and Processing Co. in Mt. Holly, N. C., for 11 years, serving as superintendent of various of that company's plants. Since 1941, he had engaged in efficiency work and textile sales. Surviving are two daughters, a sister and a brother.

Linwood G. Dobson, 84, who retired in 1946 as superintendent of maintenance for Springs Cotton Mills, Lancaster , S. C., after 50 years with the firm, died March 3 of a heart attack. Surviving are his wife, seven daughters, two sons and a brother.

Charles F. Harry, Sr., 66, founder and president of Minette Mills, Inc., Grover, N. C., died March 8 of a heart attack. Mr. Harry is survived by his wife, four sons, three daughters, two brothers and a sister.

Newton W. Holland, 84, who served for 33 years in a supervisory capacity at A. M. Smyre Mfg. Co., Gastonia, N. C., died March 3. Surviving Mr. Holland are his wife, a daughter, four sisters and a brother.

Lucian K. Palmer, 61, South Carolina representative for Barreled Sunlight Paint Co., Providence, R. I., died suddenly Feb. 16 at his home in Spartanburg, S. C. Mr. Palmer had represented the firm in various sections of the South for the past 33 years and was well known among Southern textile men. His wife survives.

Frederick H. Wandelt, vice-president of John P. Maguire & Co., New York, died Feb. 19 in a New York City hospital after a brief illness. He participated in the organization of the Textile Banking Co., Inc., of which he was vice-president. He joined Maguire in 1936. Surviving are his wife, a daughter and a son.

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MILL NEWS

CONSTRUCTION. NEW EQUIPMENT. FINANCIAL REPORTS. CHARTERS. AWARDS. VILLAGE ACTIVITY. SALES AND PURCHASES

DANVILLE, VA.—According to the annual report of Dan River Mills, Inc., for the year ending Dec. 31, 1951, "The company is continuing to modernize its plant and equipment and last year spent $6,950,000 for that purpose, the major portion of it for expansion of finishing facilities. Expenditure of $6,500,000 in capital funds for plant modernization is planned for 1952."

GREENVILLE, S. C.—Union Bleachery, a division of the Aspinook Corp. of Jewett City, Conn., has been sold to Cone Mills Corp. of Greensboro, N. C. The price was not disclosed, but it is understood to have been a cash transaction with March 31 set as the date of transfer. The plant floor space covers approximately 400,000 square feet while the property includes 350 to 400 acres with a village of 178 houses. The plant is equipped for dyeing, bleaching and finishing cotton and synthetic piece goods. Cone officials announce that no change in management or operating policy of Union Bleachery is contemplated and that the bleachery will continue to operate as a commission finishing plant with personnel unchanged. Union bleachery was organized about 50 years ago and was operated by the Arrington family of Greenville until 1947 when it was sold to Aspinook.

ROCK HILL, S. C.—Construction of a big addition to the Celriver Plant of Celanese Corp. of America will be halted temporarily "to examine the future needs" of the company. Harmon Howorth, plant manager, stated that the expansion program is being "deferred" but that the company thought the deferment would be of a temporary nature. The expansion program was started in the Fall of 1950 and it had been expected that the entire project would be completed this year.

MARTINSVILLE, VA.—Officials of Loom-Tex, Inc., have announced that the plant will shut down operations permanently sometime during March. The plant employed about 300 in the production of print cloths, and has been operating here since 1945. Loom-Tex, Inc., has its headquarters in New York City and maintains another plant under the same name at Kings Mountain, N. C.

MOUNT HOLLY, N. C.—Seven plants of American Yarn & Processing Co. are to be cited for their safety records. The finishing plant and the knitting plant of Holly-Knit, Inc., Mount Holly, are to receive awards from the National Safety Council for operating without a lost-time accident during the entire year of 1951. Five other plants are to receive certificates of achievement for reducing the injury frequency rate per plant during 1951. They are the Madora Plant, Adrian Plant and the Woodlawn Plant, all in Mount Holly, and the Union Plant at Maiden, N. C., and the Spun Fibers subsidiary at Whitnel, N. C.

SHAWMUT, ALA.—Housing five major research departments, the newest addition to the West Point (Ga.) Mfg. Co. is a modern research center here. Work on the new center started in 1950. All divisions of the research section, except testing department, are housed in the new building. The five major research departments include chemical, testing, textile, electronics and mechanical departments. The new buliding has a long, low appearance and is constructed in a "U" shape. Exterior walls are cement brick up to window sills and glass and steel above the window level. In the center portion of the "U" is a glassed-in lobby and library, with walls of plate glass from floor to ceiling.

GREENSBORO, N. C.—Ceasar Cone, treasurer of Cone Mills Corp., stated recently that a long-range project aimed at modernizing the company's 1,400-acre mill village had reached the half-way point and that the plant so far has spent $2,500,000 building new homes and modernizing old ones. This year the cost of the work is expected to amount to about $150,000.

PENROSE, N. C.—Naumkeag Steam Cotton Co. of Salem, Mass., is reported to have made available for sale its plant site near Penrose, in the western North Carolina mountains. The company acquired the tract over three years ago, but plans for construction of a $3 million dollar plant were abandoned and the firm acquired the Whitney, S. C., mill property from Crescent Corp. for operation of a sheet manufacturing plant.

SUMTER, S. C. — Operations began last month at the new Santee Print Works plant which has a production capacity three times that of the former plant. The new plant processes gray material into a finished print, employing about 100 persons.

SPRAY, N. C.—Officials of Union Carbide & Carbon Corp. recently confirmed reports that the firm will build a $30,000,000 staple fiber plant near Spray if it can get government approval. It was explained, however, that the company did not feel it should start construction until an application for a certificate of necessity is approved by the National Defense Production Administration.

CHARLOTTE, N. C. — The carded yarn plant operated here by Wilkes-Barre (Pa.) Lace Mfg. Co. is being purchased by J. A. Baker of Charlotte and a group of associates. The sale price was not announced; the transaction is expected to be completed by April 1. The deal includes 33.17 acres of land, the three-story manufacturing plant and auxiliary buildings containing 80,000 square feet of floor space, yarn manufacturing machinery including 12,800 spinning spindles, machinery repair parts and yarn manufacturing and packing supplies.

SANFORD, ME.—Elmer L. Ward, president of Goodall-Sanford, Inc., recently confirmed reports that the firm "is currently looking over the South for a desirable plant or site in a desirable labor location." He said the company was interested in a spinning and weaving mill in the South, and had been surveying the area for some time seeking either a going plant or a desirable location where a plant might be set up.

LAWRENCEBURG, TENN.—Provided government approval can be obtained, citizens of Lawrenceburg will vote soon on whether or not to approve a bond issue for $4,500,000 for construction of a plant to be operated by Wamsutta Mills of New Bedford, Mass. It is reported that the plant would employ about 750 persons. Wamsutta, which has been established in New England for more than a century, produces sheets, pillow cases, dress materials and other cotton fabrics. Fisher Abramson, treasurer, revealed recently that an option to purchase 115 acres of land in Lawrenceburg is held by Wamsutta.

ATCO, GA.—Ground was broken recently for construction of a large addition to Good-

LYDIA COTTON MILLS of Clinton, S. C., one of 16 surviving firms out of 136 chartered by the State of South Carolina in 1902, this month is observing its golden anniversary. The mill started operations 50 years ago as a small unit of 6,000 spindles, 150 looms and 40 employees. Today it is one of the state's most modern plants with 66,240 spindles, 1,560 looms and more than 800 employees.

Lydia Cotton Mills, together with its sister plant, Clinton Cotton Mills, is headed by P. Silas Bailey, president and treasurer; George H. Cornelson, vice-president; David S. Cook, vice-president in charge of manufacturing; and J. D. Hairston, secretary. The plant's monthly publication, *The Clothmaker*, featured the anniversary this month with photographs and articles comparing the mill in 1902 to today's operations.

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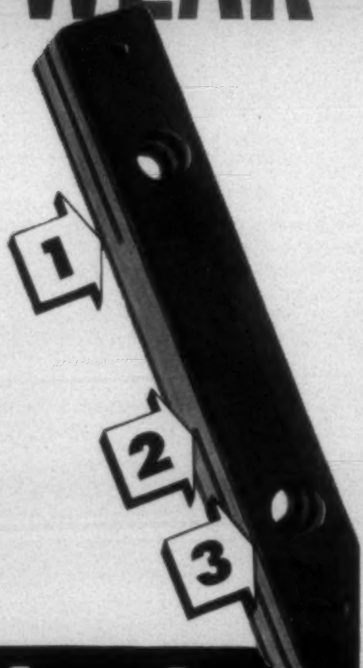

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GREENVILLE, S. C.

year Clearwater Mills (Mill No. 3), of Goodyear Tire & Rubber Co. According to G. I. Parmenter, superintendent, plans for the new addition call for a 300-foot-long, 280-foot-wide building, consisting of the latest textile design. The addition will be air conditioned and will be located south of the main plant. When completed, the new addition will house twisting and weaving machinery for the production of synthetic tire fabric. Mr. Parmenter said that it is expected to be in operation by Fall.

WILLIAMSTON, S. C.—Textron, Inc., recently was granted permission by the National Production Authority to proceed with construction of a $6,597,800 plant here to weave synthetic yarns.

MOORESVILLE, N. C.—An "inside" look into the complex operations of a completely integrated major textile mill is provided in "About Mooresville—What It Can Mean To You," a two-color, profusely illustrated booklet issued by Mooresville Mills. Designed primarily for stockholders, customers and employees, the booklet is also of interest to everyone in the textile industry. Text and pictures point up the intricate processes of making fiber into fabrics for the style-conscious volume market, and outline the complicated channels of distribution from mill to consumer. Copies of the booklet are available from the Sales Promotion Department, Mooresville Mills, Empire State Building, New York.

CLARKESVILLE, GA.—Officials of Clarksville Mills report that employment at the plant has now grown to 229 persons. They report further that 220 looms are now operating on three shifts in the weave room and 75 per cent of the throwing department is now on full production. The preparation department and cloth rooms are now operating two shifts and will be increased as the need arises.

ROCK HILL, S. C.—Construction of a two-story addition containing 88,000 square feet of floor space is now under way at Rock Hill Printing & Finishing Co. It is reported that most of the structure will be used as warehouse space, to relieve congestion in the present plant. The addition is expected to be completed sometime in September.

CONCORD, N. C.—Donald G. Brewster, president of Oscar Heineman Corp. of Chicago, announced March 11 that the company has acquired the former plant of the Hoover Hosiery Co. at 20 N. Kerr Street in Concord. The property comprises approximately 40,000 square feet and was formerly

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used as a hosiery mill by the Hoover company. The entire Hoover operations are now housed in its new plant on Highway 29-A near Concord. Alterations will begin immediately, including the installation of air conditioning and refrigeration throughout. All new throwing equipment of the latest design will be installed to produce high quality hosiery and tricot knitting yarns as well as general throwing of synthetic and combination yarns. The mill is expected to be in operation about June 1. The property includes sufficient land for further expansion, Mr. Brewster said. Oscar Heineman Corp., founded in 1893, is one of the country's leading processors of silk, rayon and other synthetic fibers including nylon, Orlon and dacron.

CLINTON, S. C. — I. W. Spiegel, vice-president of International Looms, Inc., of New Jersey, recently announced that an additional shift probably will be added to operations at the firm's Gwen Evan Plant here. The firm plans to put into operation some equipment that had not been run at the local plant.

STARTEX, S. C.—The Startex Division of Spartan Mills has applied to the National Production Authority for priorities for materials to construct a gymnasium-auditorium at Startex School.

GASTONIA, N. C.—Firestone Textiles has been granted a building permit for construction of a $38,000 office addition. The addition will double the capacity of the main office and allow the plant to consolidate all its offices under one roof. It is expected to be completed by June.

SUNCOOK, N. H.—Textron, Inc., has announced plans for closing its rayon plant here and for construction of a third cotton mill in the South in Monroe County, Miss., subject to approval by the National Production Authority.

DUBLIN, GA.—Dublin Woolen Mills, a division of M. T. Stevens Southern, recently presented $35,000 to the Laurens Hospital Authority to be used for construction of a new nurses home to be used in conjunction with a new county hospital now under construction.

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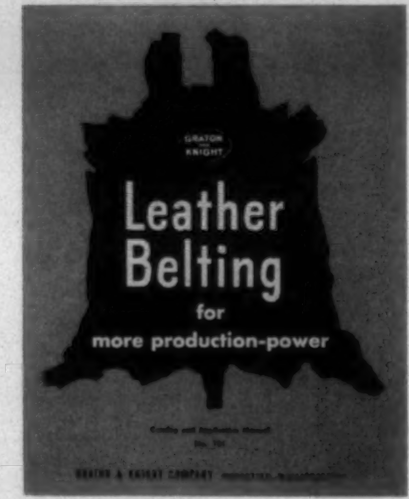
Graton & Knight Catalog



Newly released by the Graton & Knight Co. of Worcester, Mass., is a 40-page catalog and manual featuring leather belting. The theme of this new catalog is more production power, a subject that is particularly timely, and especially so to industries requiring 'round the clock production without costly shut-downs. Furthermore, many of these day and night industries and processes have unusually tough drives that require great tensile strength, little longitudinal elongation yet plenty of pliability and elasticity to meet unusual conditions —conditions requiring top quality leather belting.

In this new catalog, such industries will find just the information they need—the proper belt for every installation, how to get longer life from their belting, how to make a belt endless—plus, of course, the usual listing of sizes, prices and specifications, all indexed for quick reference.

Additional data that should be helpful are the charts and tables showing horsepower ratings, belt speeds, specifications of controlled tension bases, along with a set of formulas showing the engineer just how to figure the belting needs for every job. Distribution of this new catalog is through the Graton & Knight field organization. Every user of belting will want a copy for his files, the company states.

New Hart Products Plant

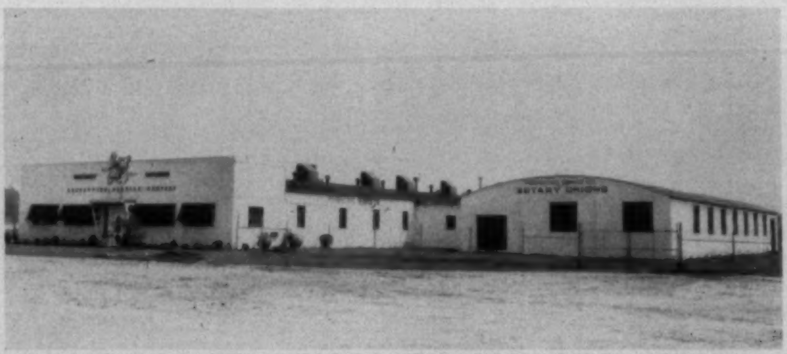
Hart Products Corp., manufacturer of textile chemicals, have announced a $400,000 expansion plan which includes the complete modernization of an 80,000 square foot all-brick building in Jersey City, N. J., which will be the site of its new plant and laboratories. Alterations and installation of equipment will be completed by June, 1952, at which time Hart's productive capacity will be greatly increased to meet the growing demands of its many customers in the textile industry.

Hike Resloom Output

Substantial expansion of production capacity for Resloom HPS, a dry powder melamine resin for textile finishing, was announced recently by Monsanto Chemical Co. H. J. Heffernan, general manager of sales of Monsanto's Merrimac Division, in announcing the expansion, said the increase was authorized to keep pace with increasing consumer demand for this type of melamine resin.

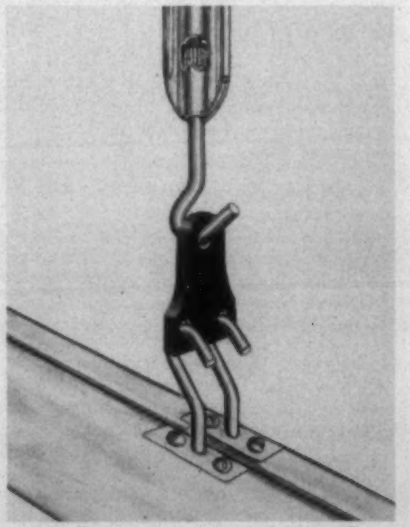
"Resloom has been adopted as standard by finishing mills," he said, "as a most effective agent for developing permanent embossed effects on cotton fabrics. The resin is also an important chemical agent for the stabilization of woolen, worsted and rayon fabrics.

"Embossed cotton fabrics are growing rapidly in consumer popularity," Mr. Heffernan pointed out, "resulting in a marked increase in demand by the finishing mills for application of the Resloom HP type of resin. Resloom HPS was introduced to the textile industry several years ago and was a pioneer in the field of chemically treating textile fibers to gain shrinkage control and crush resistance in cottons and rayons, and resistance to shrinkage in woolens."



PRODUCTIVE CAPACITY OF ROTARY UNIONS BY PERFECTING SERVICE CO. has been increased by 25 per cent through completion of an addition *(right)* to the firm's plant at Charlotte, N. C. Perfecting Service produces a steam and refrigerating joint for use on rotating shafts and drums in slasher cans, dry cans, calendars, embossing, printing and coating machines.

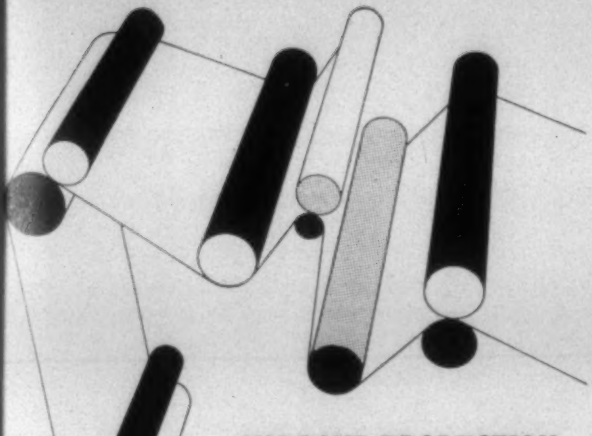
Fibre Twin Coupler



The demand among mills for an efficient twin coupler for use in combining harness frames equipped with outside hooks instead of outside eyes has resulted in the development by Steel Heddle Mfg. Co., of the Fibre Twin Coupler. This is used in making two harness frames act as one in the loom. Designed for use with three-eighth-inch thick frames, the Stehedco Fibre Twin Coupler eliminates metal-to-metal contact such as is experienced with the use of the metal wire formed twin coupler. This replacement of metal-to-metal contact with fibre has been greeted by those mills using it with a great deal of favor, the firm states.

Rohm & Haas Charlotte Branch

The Rohm & Haas Co. has announced the opening of new office and warehouse facilities at Charlotte, N. C. Company officials report that the new quarters (contained in a one-story brick-and-steel building comprising 12,000 square feet floor area) have been made available to provide better service to the chemical firm's industrial consumers in the Southern area, particularly textile manufacturers. The new warehouse provides for both drum storage and bulk storage of the Rohm & Haas chemicals,



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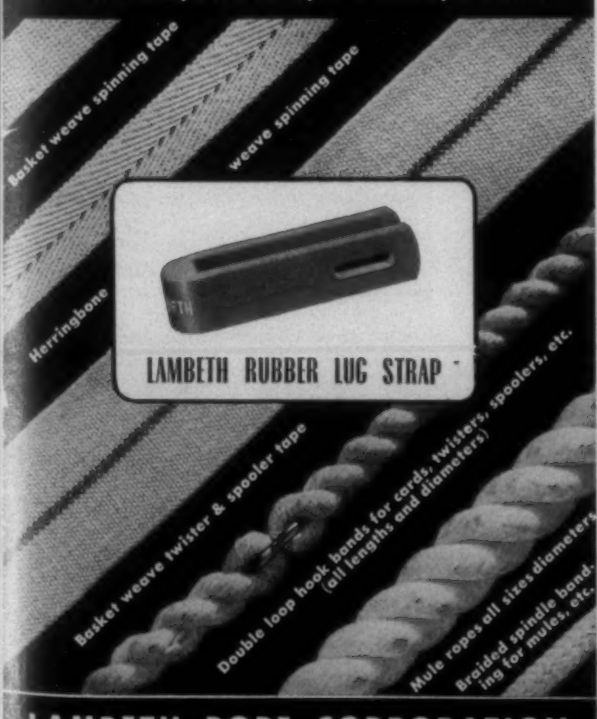
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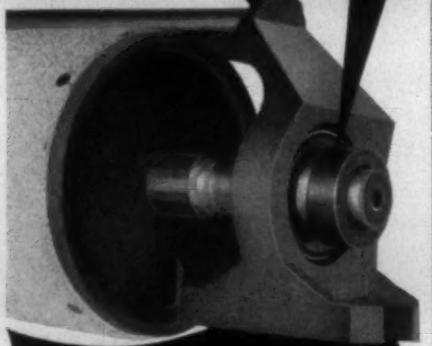

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You can now maintain *constant control* of Take-up roll tension on Model "X," "K," and "E" looms by installing the new Seabrook *ball-bearing* Take-up Roll Bearings.

PRE-LUBRICATED

and doubled sealed, these ball-bearing units will never require lubrication.

SELF-ALIGNING

Seabrook units are easy to install, with no danger of faulty alignment.

Wear on journals is eliminated, and maintenance costs drop sharply when you install these better, longer-lived Seabrook bearings. "Seconds" due to improper Take-up roll turning is eliminated.

Make the Seabrook test for yourself. Install Seabrook bearings on the Take-up rolls of one loom or a dozen. We'll gladly help you. Let's try it now!

Write today for details and specifications.

Seabrook
TRANSMISSION CO.
ANDERSON, SOUTH CAROLINA

P. O. Box 6 Tel. 3731

resins, adhesives, enzymes, and detergents. Cold storage facilities are also provided.

Of particular interest to textile industry consumers will be the improved service on such products as the Lykopon and Formopon reducing agents (used in vat dyeing), the Rhonite and Rhoplex textile finishes, and the Rhozyme desizing agents.

A number of other products manufactured by Rohm & Haas and consumed in the area will be stocked at Charlotte. These include the Triton series of detergents and wetting agents, as well as the Uformite resins, which are wet strength agents for paper and adhesives used in the manufacture of plywood and furniture. A resin of the latter series, Uformite 435, is now available in tank truck quantities as the result of the new bulk storage and loading facilities.

The Charlotte warehouse augments service supplied by Rohm & Haas distributing points at Louisville, Knoxville and Chattanooga. The offices serve as headquarters for Rohm & Haas' representatives in the Southern area. The entire operation is under the direction of P. H. Del Plaine, who also serves as Southern district sales manager of the textile chemicals department. Other representatives working out of the Charlotte offices are W. A. Wardell, Russell G. Lawrence and C. L. Smith.

Bryan Associates

The new engineering firm of Bryan Associates began operations March 1 in Charlotte, N. C. With headquarters on the second floor of 815 W. Trade Street, the new business provides professional engineering to Southern industry in textile, hosiery, power and process on mechanical services.

Associates in the firm will be E. W. Bryan and Emmett W. Bryan, Jr., both of whom have wide experience in the field of mechanical engineering.

The elder Mr. Bryan has approximately 32 years' experience in the power and piping industries with such companies as Georgia Power Co., Grinnell Co. of Charlotte, Lumsden and Van Stone of Boston, and J. E. Sirrine Co. of Greenville, S. C. He is a licensed engineer in North and South Carolina, Georgia, and Massachusetts; and also holds memberships in the American Society of Mechanical Engineers, Technical Association of the Pulp and Paper Industry, and the American Welding Society.

Mr. Bryan, Jr., has eight years' experience in power and piping industries with Republic Flow Meters Co., Tubize Rayon Corp., and Industrial Piping Co. of Charlotte. Graduate of Georgia Tech, he is licensed as an engineer in North Carolina and holds membership in the American Society of Mechanical Engineers and the American Instrument Society.

New Reliance Bulletin

Pointing up the efficiency-improving, cost-reducing advantages that packaged, all-electric, adjustable-speed drives bring to a wide range of production machines and processing equipment, a new, eight-page, attractively-illustrated booklet has been issued by the Reliance Electric & Engineering Co., Cleveland, Ohio, and is now available for general distribution. The booklet, identified as Bulletin D-2311, presents a simplified, easy-to-read, non-technical explanation of the Reliance V-S Drive, its "economics," application versatility, and operational flexibility in providing adjustable speeds from a-c circuits.

Briefly discussed are seven basic functions of this effective method of power transmission, available in drives of five types ranging in ratings from three-fourths all the way up to and including 200-horsepower. Application of this equipment to seven typical manufacturing operations in as many industries also is illustrated. Supplementary information includes diagrammatic and tabular charts covering basic speeds and horsepower-torque characteristics of the drive, and a listing of the company's 40 sales offices in the U. S. Copies of this interesting, factual literature are available on request. Write to the Reliance Electric & Engineering Co., 1088 Ivanhoe Road, Cleveland 10, Ohio.

A.P.T. Bobbin

American Paper Tube Co., Woonsocket, R. I., and Greenville, S. C., is manufacturing a new bobbin designed for and used on Saco-Lowell's new Gwaltney spinning frame. The new bobbin, which is 12 inches in length, with taper of 3/16ths of an inch from 1½-inch diameter at the base to 1 5/16ths of an inch at the tip, is constructed by A.P.T.'s patented Plasti-weld method. In this method a molded plastic seat, of the special design needed for the Gwaltney frame spindle, is simultaneously molded and combined with metal tip and laminated bobbin barrel into a homogeneous unit by exclusive plastic-welding process which insures permanent precision. Further information and brochure describing Plasti-weld bobbins in detail may be obtained by writing the company.

Chemical Feed Packaged Unit

A new chemical feed packaged unit, which delivers liquids in desired amounts under pressure, is announced by the Bird-Archer Co. This unit is suited for feeding boiler water treatment as well as delivering chemicals and other fluids for processing.

This self-contained, extra heavy Baco unit offers high pressure controlled feed at low cost. The chemical reservoir tank is of sturdy welded steel construction, available in 50 or 100 gallon capacity. The chemical proportioning pump can be designed for various rates of feed at different pressures. A specially designed motor-driven agitator assures completely mixed fluids at all times. A stainless steel strainer is provided between the suction side of the pump and the tank. The pump is mounted below the tank to minimize air binding and to maintain a positive suction head.

A duplex-pump model with divided tank is also available. Both types of units are supplied complete with all necessary piping and are ready for connection. Bulletin 52 giving complete data is free on request from the Bird-Archer Co., 4337 N. American Street, Philadelphia 40, Pa.

General Dyestuff Circulars

General Dyestuff Corp., 435 Hudson Street, New York City, announces the release of the following new circulars: G-692—Algosol Brown IRRD Supra; G-701—Celliton Fast Rubine BA-CF; G-702—Celliton Fast Yellow GRA-CF; G-703—Alizarine Blue SEN Extra CF; G-706—Supranol Yellow GGA Conc CF; G-711—Indanthrene Brilliant Green BN Pure Double Extra Paste Fine.

New Instrument Pen

New industrial instrument pens said to eliminate flooding and reduce paper plugging and choking have been designed by Minneapolis-Honeywell Regulator Co. for its strip chart electronic instruments. The new pens have removable tips and a new reservoir construction which eliminates flooding because the effective ink level is always below the writing tip.

Among other advantages are: The pen operates with decreased pressure on the instrument chart, tending to reduce paper fibre choking; thorough cleaning is made easy by a simple disassembly, and the new design fits on standard pen carriages, permitting improved performance for already installed instruments. Construction and operation details were described as follows:

After the reservoir has been filled through a tube, ink is drawn into the tip through a capillary neck. The air pressure above the ink is thus reduced so that the ink level in the re-entrant tube drops to below the level of the writing tip. The level in the tube is the effective ink level with respect to the tip.

A small negative head which is thus established is maintained by the difference in air pressure as long as the ink level is above the inner end of the re-entrant tube; and when the ink level drops still lower, no ink in the reservoir is above the writing tip and capillary action is still the only means by which ink is delivered to the tip.

A clear glass reservoir has the same ink capacity as the reservoir in the older glass-barreled pen used on these recorders. Clamped to the reservoir is a metal carrier to which the metal capillary neck is attached. The tip, which screws into a threaded connector on the neck, is equipped with a knurled-screw grip and is easy to unscrew. It can then be cleaned by passing a small-diameter wire through it from the rear, where the opening approximates that of the capillary—much larger than the tip opening. Not only will clogging material never be pushed back into the reservoir, but the wire

Another Major Mill BOOSTS WEAVING EFFICIENCIES more than 1%

A finer, perfectly uniform and stable size is made by this company's Gaulin Homogenizer. Size now penetrates better, bonds yarn fibers smoothly, firmly and evenly.

...with GAULIN-Homogenized Size

"We find Gaulin-Homogenized Size makes a *stronger, more elastic* yarn — that sheds less and breaks less at the loom and slasher," say the management of this world-famous cotton mill. "Since we've switched to Gaulin-Homogenized Size our weaving efficiencies have jumped 1 to 1½%."

This is just one of hundreds of similar experiences. If your plant would benefit from higher weaving efficiencies we strongly suggest you write for the full facts about Gaulin guaranteed performance, today.

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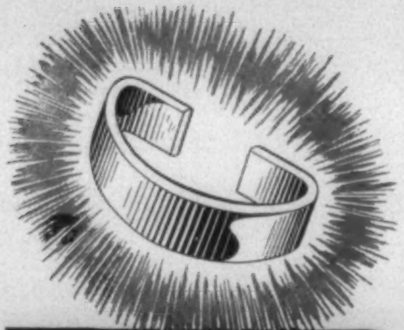
World's Largest Manufacturer of Homogenizers, Triplex Stainless Steel High Pressure Pumps, and Colloid Mills



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Throughout the spinning and twisting industry Dary Ring Traveler representatives are respected as "right-hand men" wherever traveler problems arise.

This service reputation, plus the fact that they are supported by superior product performance, make Dary Ring Traveler representatives valuable men to know.

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THE DARY RING TRAVELER CO.
TAUNTON, MASSACHUSETTS
LINDSEY I. PHILLIPS, TREASURER, TAUNTON, MASS.
JOHN E. HUMPHRIES, BOX 843, GREENVILLE, S. C.
JOHN H. O'NEILL, BOX 720, ATLANTA, GA.
JAMES H. CARVER, BOX 22, RUTHERFORDTON, N. C.
CRAWFORD RHYMER, BOX 2261, GREENVILLE, S. C.

insertion is easy. The entire pen assembly can be removed for any required cleaning or washing. Its mounting ears simply slip over the pen carriage bracket.

The writing tip is made of platinum alloy. It will wear better than former models because the pen pressure has been decreased to about one-third through the use of the counterweights, the company states.

Syntho-Softener C

Syntho-Softener C, a substantive product in the form of a highly concentrated white paste, is the latest development in the Syntho-Softener series of softening agents being marketed by Hart Products Corp., 1440 Broadway, New York 18, N. Y. Syntho-Softener C assures a durable soft, full, mellow hand with maximum draping qualities for all types of cotton, rayon, acetate, bemberg, linen and nylon fabrics. The use of this product is said to avoid the disadvantages of the cation-active finishes. It may be used on whites with no yellowing and particularly on colored goods since it does not effect the color or light fastness of dyed goods or prints. Syntho-Softener C will not cause mark-offs, odors or rancidity. It is easily applied in the usual way in the pad, jig, dyebeck, or quetsch; shows no discoloration on pressing or aging of the goods; and will exhaust in long baths to give economical application.

New Fairbanks Circular

The Fairbanks Co., 393 Lafayette Street, New York 3, N. Y., is distributing to the industry its new circular describing the Fairbanks renewable composition disc bronze valves. The Fig. U-01 bronze globe valve is used to feature this group and the highlights of their construction. The circular illustrates the different valves that comprise this group, assembled from the basic valve body and a few additional parts, and it is completed with the specifications and the standard sizes of the various valves. An important part of the circular is a description of the discs that are available in the Fairbanks renewable composition disc valves and a disc guide for their use.

Heli-Coil Thread Insert

According to Heli-Coil Corp., Danbury, Conn., stainless-steel helical-wire thread inserts are reducing equipment "down-time" wherever machine operations are impaired by stripped or worn threaded holes. Time and cost savings up to 80 per cent have been reported when comparing the wire-insert method of thread repair with conventional ones. In addition, Heli-Coil thread-inserts provide higher loading strengths and are more resistant to wear and corrosion than original threads, it is claimed.

Heli-Coil thread-inserts are available in the following standard thread classifications: 4-40 to 1½-6 sizes in the national and unified coarse thread series; 6-40 to 1½-12 in the national and unified fine thread series; ⅛-27 to 1-11½ in the pipe thread series. These inserts are supplied in one, 1½ and two-diameter lengths. For special applications, non-standard threads and sizes can also be supplied.

In comparison with conventional thread repair operations—the oversize-thread method, the build-up by welding method, and the solid-bushing method—the wire-insert operation requires only the cleaning out of the damaged thread, the re-tapping of the hole with Heli-Coil taps and the placement of the wire-insert in the re-threaded hole.

Because they are slightly larger than the hole into which they are installed, these thread inserts are self-locking. No amount of vibration or bolt tightening will loosen them. However, they can be quickly and easily removed with a special tool if this should become necessary.

Janie Spot Eraser

A handy dry-type cleaner that will easily remove grease, oil and food stains from all types of fabrics without damage is announced by R. S. Cowen Co., 130 West 42nd Street, New York City, sole distributor for the item. The manufacturer claims that it is the only cleaner that will safely remove grease, oil, food stains and average dirt by merely rubbing on and brushing off the powder that the chalk-like stick leaves when applied to the stain. The firm states that it has been tested and approved by independent laboratories, as well as Burlington Mills. It is further claimed that the cleaner does not leave a ring, is completely odorless and does not affect color. It is available in two forms; a small pocket size, No. J-20, in a convenient lipstick-type container; and a large household and industrial size, No. J-50.

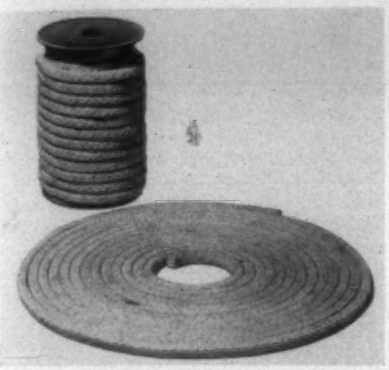
Peregal ST

Antara Chemicals Division of General Dyestuff Corp. announces commercial availability of Peregal ST, a new and amazingly effective stripping agent for vat, sulphur and direct dyeings. Comparison tests indicate that in many cases the new stripper is ten times as effective as other agents considered excellent until now.

As a weakly cationic material, Peregal ST forms very stable cation-anion complexes with dyestuffs containing sulfo groups, or phenolate groups in aqueous solution. In stripping operations, once the fiber-dyestuff bond is broken, the dislodged dye is preferentially bound to the Peregal ST, for which it has greater affinity than for cellulose. Even after prolonged treatment this equilibrium cannot be shifted toward dyestuff-on-cotton.

Peregal ST, described as a colloidal dye-sequestering agent, stems from Antara's acetylene chemical program. Samples and information can be secured from the company at 435 Hudson St., New York 14, N. Y.

Flexrock No. 401 Packing



The mechanical packing division of Flexrock Co., 3670-A1 Cuthbert Street, Philadelphia 4, Pa., announces a braid-over-braid asbestos packing impregnated with Teflon throughout. Known as Flexrock No. 401 Packing, it offers several distinct advantages, foremost of which is the superior resiliency imparted to the Teflon by the integral asbestos fibers. This resiliency permits a tight, lasting seal at low gland pressure and solves the cold flow problem many times ecountered with solid Teflon packing. Other advantages include moderate price (compared with sets of molded or machined, endless ring Teflon packing) and versatility. Since it is furnished in continuous form and is highly resilient, one size of No. 401 is suitable for packing a number of different stuffing boxes, the company claims.

Of special interest to textile manufacturers will be the field reports that Flexrock No. 401 Packing has proved particularly effective in equipment handling the following chemical formulation widely used in the textile industry—20 per cent ammonia, ten per cent sulphuric acid, one per cent formaldehyde, 4 per cent glycol, etc.

Flexrock No. 401 Teflon impregnated braided asbestos packing can't be attacked by nor contaminate any industrial acid, alkali or solvent. It has Teflon's characteristically anti-hesive surface that makes for free spindle operation at all times, will never "sieze" a shaft or spindle, and is serviceable from —100° F. to 500° F. Furnished in continuous lengths, square cross section, in sizes from one-eighth inch to one inch by one-sixteenth-inch increments. For further information write Mechanical Packing Division, Flexrock Co., 3670-A1 Cuthbert Street, Philadelphia 4, Pa.

Equipment Firm Expanding

Southern States Equipment Corp., Hampton, Ga., is expanding. Plans have been completed and construction started on a new, one-story building to join the present facilities. The new addition will be a steel and masonry structure of modern functional design covering approximately 25,000 square feet.

Specifically designed to complement the existing facilities, the new building will greatly increase available manufacturing space. The result will be an integrated arrangement of floor space providing improved communication between departments and a better flow of material to and from production machines. The new structure will be arranged to allow simultaneous loading and unloading of rail cars and large trucks.

The building program will include considerable revision of the existing facilities. The general offices will be enlarged and modernized. Improved lighting and air

The Textile Shops

Acid Tanks
Ball Bearing Journal Assemblies for Slashers and Dry Cans
Bleaching Tanks and Tubs
Card Screens
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Chemical Tanks
Condensers
Condenser Screens
Conveyors
  Pipes and Returns
Coppersmithing
Cowl Ventilators
Cylinders
  Spinning
  Spooling
  Twisting
Drip Pans
Dye Kettles and Vats (New)
Dry Cans
  New and Repairs
Driers
Filters
Misc. Sheet Metal Work
Picker Screens
  Perforated Metal
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FOR CLOTH ROOM STITCHERS AND BLEACHERY SEWING

ALL NUMBERS
CARRIED IN STOCK FOR
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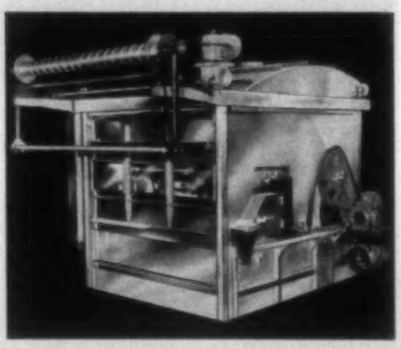
conditioning will be installed and departmental sections will be rearranged for easier communication. Other features of the completed building program will be an employees cafeteria and a fireproof vault for protection of all important drawings and documents.

Southern States Equipment Corp. is a nationally known manufacturer of high voltage electrical equipment for the power industry and is a rapidly growing producer of textile machine parts and mechanical devices.

Hunter Open-Width Kettle

James Hunter Machine Co., North Adams, Mass., has added a new Hunter open-width piece dye kettle to its line developed primarily for dyeing pile fabrics and other face finish goods in open width plus other types of goods in rope form. Several of these kettles are now in successful operation in a large Pennsylvania mill, the firm states.



The tank conforms to standard Hunter construction of No. 11 gauge, Type No. 316 stainless steel with seams welded both inside and out. The safety-type enclosure doors are a good illustration of the value of many years experience in dyeing machinery manufacture. They slide downward below the floor line. Steam will escape from the top as they begin to open, thus protecting the operator from burns that might occur if the doors opened upward.

Included as standard equipment are a bakelite spreader bar to keep out wrinkles when running open-width goods, a built-in pin guide rail for goods in rope form, a spiral delivery roll, and a folder unit with stainless steel draw driven by separate gear motor that may be run only when unloading to eliminate the usual belts or chains from delivery roll to main reel shaft. The gear motor drive has three easily changed speeds.

The special feature of this dye kettle is a unique triangular reel with three tilting bars for supporting the goods. Supported at their centers by a swivel mounting, either end of the bars tend to slope in the opposite direction should the cloth work towards one end of the reel, thereby keeping the cloth centered. Extra equipment includes dye feeds, automatic controls, exhaust systems and other extras normally used for piece dye kettles.

Variable Speed Units

Sterling Electric Motors, Inc., of Los Angeles, Calif., announces the addition of Type KFEA variable speed units with single reduction gears in ratings of 20 to 25 horsepower. These units are manufactured in speeds of 728 r.p.m. and lower with infinite speed adjustment within the ranges of 2:1, 3:1 or 4:1. Features of the drive are: positive adjustment of pulleys, accurate maintenance of speeds under varying loads, belt tension in proportion to load, positive oil seals, single train helical gears, Herringbone Rotor, and direct-through ven-

We Cut Your Labor Costs Materially

Textiles show the fastest rising labor costs in all U. S. Industry . . . and they are still rising fast.

Materials handling is one of the biggest users of textile labor, and therefore the place where the largest savings can be made.

We engineer, build, and install conveyor and other materials handling systems which will cut your costs materially. Call on us for consultation.

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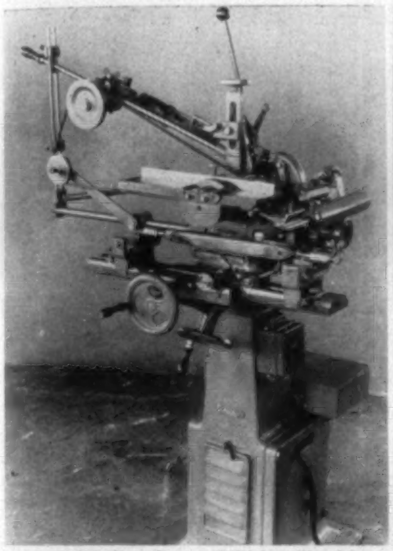
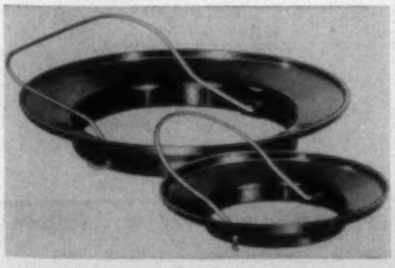
Staubli Truing Machine



H. J. Theiler Corp., Whitinsville, Mass., producer of Slide-tex products for the textile trade, announce availability of its Staubli universal shuttle truing machine Type WEM. According to the company, the Staubli machine (1) dimensions all shuttles very accurately and alike; (2) grinds and polishes shuttle points to exact original taper; (3) equalizes angles and thickness of shuttle, and height of shuttle points; (4) mills shuttle sides to smooth new surface; (5) cuts grooves and slots into shuttles, shuttle box fronts and reed frames; (6) machines wooden fronts and backs of shuttle boxes; (7) re-sharpens cutter knives without their removal from the cutter; (8) can be used for planing, drilling and polishing in general; and (9) the pirn rectifying device turns old bobbins to a true round.

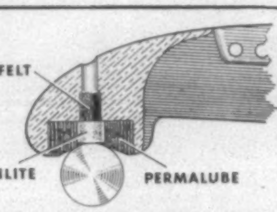
Paint Boy



A simple paint can attachment, combining a plastic lip and a wire handle, promises an end to paint losses from running and dripping, while serving also as a brush rest, wiper and can carrier. Named Norloc Paint-Boy, the accessory is a development of Norloc Division, Norton Laboratories, Inc., Lockport, N. Y. Designed for the professional painter as well as the household handyman or woman, "Paint-Boy" is manufactured in two sizes, to fit both quart and gallon cans. Because Paint-Boy is wider than the can, it not only prevents running and dripping down the sides, but keeps the top rim and groove spotlessly clean and free from paint, claims the manufacturer. Results are an air-tight seal when the cover is replaced after use, no soiling of label and no tell-tale rings beneath the can. By using Paint-Boy as a brush wiper, instead of the rim of the can, and by using it as a brush rest (brush handle leans against Paint-Boy's wire bail), the painter is thus assured that excess paint will drain back into the can, leaving both inside and outside of top rim spick and span. A fool-proof method of attaching Paint-Boy to the can makes it a reliable and handy carrier, a feature very much in demand for quart cans and made necessary for gallon cans by Paint-Boy's width which prevents use of the regular can bail. Descriptive literature is available from the manufacturer.

Prufcoat Technical Bulletin

Prufcoat Laboratories, Inc., Cambridge, Mass., announces availability of its new Technical Bulletin Sheet No. 501 showing in chart form the chemical resistance of various types of Prufcoat. Based on both laboratory tests and practical field applications, this new technical bulletin provides potential users with the resistance ratings of Standard Series Prufcoat, "A" Series Prufcoat and Prufcoat BX white enamel to some corrosive chemicals (in both concentrated and dilute form). Copies of the bulletin may be secured on request to G. Russell Hersam, General Sales Manager, Prufcoat Laboratories, Inc., 50 East 42nd Street, New York 17, N. Y.



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WHITEHEAD Permalube SADDLES and NEBS

Whitehead Permalube Saddles and Nebs, of aluminum alloys, cost no more than old-fashioned iron ones, but they perform better and last a lot longer. Check the money saving, labor saving features of Permalube Saddles and Nebs. You'll understand why more and more mills are changing systematically to Whitehead Permalube products exclusively.

The Bearing That Oils Itself

While provisions are made for oiling the Permalube bearing, many mills find no oiling whatever is necessary. Several mills have been running Permalube Saddles and Nebs for three years without oiling. The advantages are obvious. No oil on the yarn, no sticking to break ends down, no labor to pay for oiling. New wide bearing design gives 50% more bearing area.

FEATURES THAT DEFY COMPARISON

- Years of trouble-free service
- Little or no oiling
- No oil on yarn from top rolls
- Less lint accumulation
- Easier picking—less often
- Very low friction coefficient
- Aluminum bearing holders won't score rolls
- Pivot point permanently adjusted
- Saddle self-aligning. No tilting
- Bearings quickly replaced if ever necessary for only 3c to 5c each

OVER 600,000 SPINDLES NOW EQUIPPED WITH THESE SELF-OILING PRODUCTS

Prompt delivery of any Saddles and Nebs from Ample Stocks

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Substantially reduces labor costs and cuts drying time in more than half.

The "Stienen-Obermaier" Combination High-Speed Extractor-Drier has been perfected after many years of practical research application and has been enthusiastically received by the entire trade. This new system of extracting and drying has cut the total drying time more than half over other systems and has proven a superior method to any other available for package drying. This Combination High-Speed Extractor-Drier can be utilized by even the smallest package dyer to great advantage.

The quick drying time means faster turnover of yarn in the dyehouse, eliminating bottlenecks, and cutting production time in half. This means half the required floor space and half the material carriers.

In actual operation, the material carrier is removed from the dyeing machine and placed in the extractor-drier. For average production, the entire operation is handled in this one machine requiring 1½ to 2 hours. For larger production, the same machine is used for extracting. Additional Port Driers are used to maintain the same high-speed drying results.

Submit your sample package to our laboratory and you shall receive exact data on your type of yarn.

The only complete laboratory unit made for sample dyeing, extracting and drying.

- **entirely electrically operated**
- **no steam required**

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***PAT. PEND.**

N. C. Textile Foundation Re-elects Carter

W. J. Carter of Greensboro, N. C., vice-president of J. P. Stevens & Co., was re-elected president of the North Carolina Textile Foundation, Inc., at the organization's annual meeting recently at the Greensboro Country Club. Mr. Carter has been president of the foundation since it was organized in 1942. Also re-elected were A. G. Myers of Gastonia, vice-president; W. H. Ruffin of Durham, treasurer; David Clark of Charlotte, secretary, and C. E. Baxter of Greensboro, secretary-treasurer.

Named to the group's executive committee were Mr. Carter, Mr. Clark, Mr. Myers, Mr. Ruffin, Herman Cone of Greensboro, J. C. Cowan, Jr., of Greensboro, and J. Ed Millis of High Point. Elected to fill two vacancies on the 45-member board of directors were C. S. Clegg of Mt. Holly, and David Gryder of Greensboro.

The meeting was presided over by Robert M. Hanes, president of the Wachovia Bank & Trust Co. of Winston-Salem.

The financial report presented the foundation showed that the organization received $82,128 in income during 1951, and disbursed $77,188 of that sum to N. C. State College—mostly in the form of salary supplements to faculty members of the school of textiles. In a report covering the foundation's nine years of operations it was shown that the foundation had received income totaling $1,309,722 of which $353,436 had gone to State College.

Dean Malcolm E. Campbell of the State College School of Textiles reported that enrollment at the school was down slightly because of the demands of the armed services. He pointed out, however, that in two to three years, the school would probably be "up to its ears" in students. The dean said that 58 per cent of the 500 students at the school were from North Carolina and 100 from the New York-New Jersey area. This year, he said, the textile school hopes to graduate some 150 students.

Dean Campbell said the school had put much new equipment and facilities into operation and noted a large new interest in the field of textile research and that a number of special projects are being sponsored by private firms and the government. During the past year, many new fellowships and scholarships had been established at the textile school, Dean Campbell noted, and thanked the foundation for its financial and moral support.

Shown above are some of the officers and directors of the North Carolina Textile Foundation, Inc., which held its annual meeting March 7. Shown seated, *left to right*, are: David Clark of Charlotte, secretary of the foundation; C. E. Baxter of Greensboro, assistant secretary-treasurer; W. J. Carter of Greensboro, president; and Herman Cone of Greensboro, a director. Shown standing, *left to right*, are: J. E. Millis of High Point, Clyde W. Gordon of Burlington, John W. Clark of Greensboro, William Nebel of Charlotte, David Gryder of Greensboro (a new director), J. C. Cowan, Jr., of Greensboro, E. B. Grover (faculty member at the North Carolina State College School of Textiles) and Dean Malcolm E. Campbell of the State College textile school.

February Rayon Shipments Off Ten Per Cent

Shipments of rayon and acetate staple+tow and filament yarn by United States producers in February totaled 81,500,000 pounds, a decrease of ten per cent from the 90,400,000 pounds shipped in January, according to the *Textile Organon,* statistical bulletin of the Textile Economics Bureau, Inc. For the first two months of the year a total of 171,900,000 pounds of yarn and staple+tow were shipped, a decrease of 16 per cent from the 204,700,000 pounds shipped in the corresponding period of 1951.

At the end of February stocks of rayon and acetate held by producers amounted to 115,200,000 pounds, a gain of 2,700,000 pounds over the stocks held at the end of January. The inventories were largely concentrated in rayon and acetate regular+intermediate tenacity yarn and in acetate staple+tow. From the standpoint of supply, the stocks at the end of February in viscose high tenactiy yarn amounted to only a two days' supply while the viscose+cupra staple+tow stocks were less than a two weeks' supply.

On the basis of November, 1951, operating capacity, the *Organon* has calculated that the rayon staple+tow and viscose high tenacity yarn divisions operated at essentially 100 per cent during the first two months of the year. The regular+intermediate tenacity rayon yarn branch, on the other hand, operated at 60 per cent of capacity in February, acetate yarn at 44 per cent of capacity, and acetate staple+tow at about 66 per cent of capacity.

January imports of rayon and acetate staple totaled 7,943,000 pounds, the largest figure since last August and a substantial increase over the 5,907,000 pounds imported in December. The largest suppliers for the month of January were United Kingdom with 16 per cent of the total, Norway 14 per cent, France 13 per cent, Canada 12 per cent, the Netherlands 11 per cent, Italy and Sweden nine per cent each, Belgium eight per cent, and all others eight per cent. Imports of filament yarn totaled 30,000 pounds in January, thus continuing at the nominal level of the last several months.

According to compilations of the *Organon,* the 1951 production of man-made fibers other than rayon and acetate amounted to 210,000,000 pounds, an increase of 45 per cent over the 1950 production of 145,000,000 pounds. By types the 1951 total was composed of 176,000,000 pounds of filament yarn+monofilaments and 34,000,000 pounds of staple+tow.

Before the end of 1952 the productive capacity for these other man-made fibers is expected to reach 316,000,000 pounds, annual rate, an increase of 50 per cent over the actual 1951 output. By the end of 1953, the annual productive capacity is expected to reach 434,000,000 pounds, a figure slightly more than double the 1951 output.

Largest percentage and poundage increase in man-made fibers other than rayon and acetate from the present through 1953 will be in staple+tow form with the future capacity anticipated at 4½ times the actual 1951 figure or an increase

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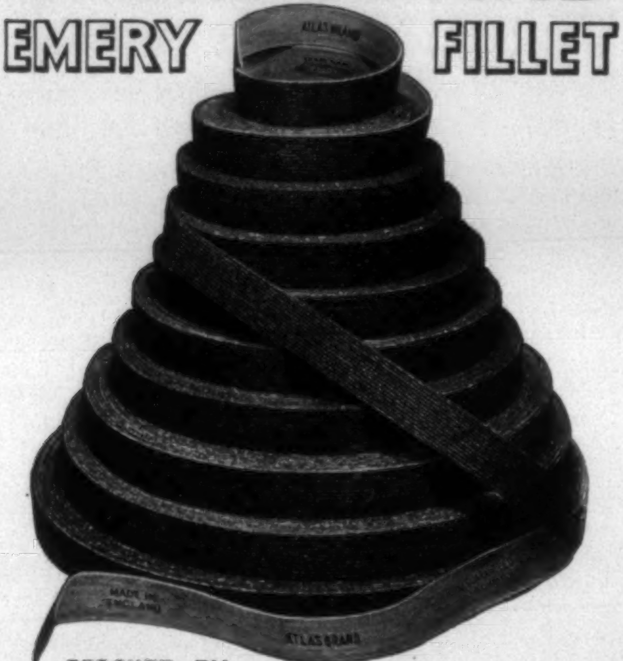

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of 122,000,000 pounds. The filament yarn+monofilament capacity at the end of 1953 will be 58 per cent or 102,000,000 pounds greater than the reported 1951 production.

Together with rayon and acetate, the actual 1951 production of man-made fibers was 1,504,000,000 pounds but this is expected to increase by 27 per cent or to 1,905,000,000 pounds late in 1952 and by late 1953 to 2,136,000,000 pounds or 40 per cent more than the 1951 output.

The *Organon* compilation of fiber consumption in 1951 reveals that a total of 6,889,400,000 pounds of cotton, wool, silk and man-made fibers were consumed, a figure one per cent greater than the 1950 total and only a fraction of one per cent under the all-time high total of 6,904,700,000 pounds in 1942. Cotton constituted 71.2 per cent of total fibers consumed, a notable increase over the all-time low participation of 68.5 per cent in 1950, but still well below the 1939-1940 average of 80.5 per cent. Silk consumption remained at the nominal 0.1 per cent compared with the pre-war average of 0.9 per cent.

Raw wool's participation in 1951, amounting to 7.1 per cent of the total fibers, was the smallest on record for the last 30 years. In 1950, wool was 9.5 per cent of the total and in the 1939-1940 period it was 8.5 per cent.

Rayon and acetate consumption in 1951 was 18.5 per cent of the fiber total, a decline from the 19.8 per cent in 1950 but still well ahead of the ten per cent pre-war participation. Consumption of other man-made fibers was 3.1 per cent of last year's total, a notable advance from the 2.1 per cent figure in 1950 and nominal participation pre-war. Man-made fiber participation including rayon and acetate was 21.6 per cent of the 1951 consumption compared with 21.9 per cent in 1950.

Percentage increases and decreases in 1951 compared to 1950 showed that raw wool usage was off by 24 per cent, silk 33 per cent, and rayon+acetate six per cent. On the other hand, cotton consumption increased five per cent and man-made fibers other than rayon and acetate increased by an impressive 45 per cent. Cotton consumption in 1951 was exceeded only in the three World War II years of 1941-1943 and was 13 per cent below the all-time record year of 1942. Raw wool poundage consumed last year was the lowest since 1940 and was 34 per cent below the record year of 1946.

From the standpoint of "utility poundage," a term originated by the Textile Economics Bureau for taking into account the processing losses of the various fibers, the fineness or sheerness of apparel fabrics and the wear life of fabrics, a different proportion is reached in the percentage totals. In the case of cotton, 12 per cent is lost in spinning and the utility poundage therefore would constitute 88 per cent of the total consumed or 4,320,000,000 pounds. All scoured wool can be spun into yarn and the consumption of 489,000,000 pounds, therefore, is left intact.

In the case of rayon and acetate staple+tow, the possible spinning loss may run as high as a nominal one per cent, but there is no spinning loss in the acetate and rayon filament yarn, because it is the yarn put into actual production by the weaver or knitter. In the case of silk there is about 20 per cent weight loss in the actual boiling off of the gum or sericin and the utility poundage of silk last year becomes about 4,500,000 pounds even though the lost weight may be replaced by tin weighting.

A sizable part of the 210,000,000 pounds of man-made fibers other than rayon and acetate consumed in 1951 was nylon and spinning losses of the man-made fiber staple would be nominal. But nylon and many other man-made fibers have other attributes that would have a bearing on utility poundage, the *Organon* points out. First there is the typical fineness of the filament yarn which, in the case of nylon, averages 20 denier compared with 122 denier for rayon and acetate filament yarn, and much coarser counts of both cotton and wool. In terms of yardage there would therefore be many more square yards of nylon produced per pound than in any of the other above-mentioned fibers.

Another factor bearing on the utility poundage of nylon and most of the other man-made fibers is the longer wear life of the garment used by the consumer. For example, a pair of nylon stockings will outwear silk stockings by several times. Because of these two factors, it would appear that there is good justification for at least doubling the reported poundage of the man-made fibers except for rayon and acetate. Thus a figure of 420,000,000 utility pounds of these fibers is obtained.

Utility poundage for the year 1951, therefore, would reach a total of 6,510,000,000 pounds compared with 6,414,000,000 pounds in 1950. The percentage of each fiber in utility poundage compared to the total therefore for the years 1950 and 1951 respectively would be: cotton 64.2 and 66.3 per cent; wool 10.1 and 7.5 per cent; rayon+acetate 21.1 and 19.1 per cent; other man-made fibers 4.5 and 6.5 per cent; silk 0.1 and 0.1 per cent. Participation of all man-made fibers increased from 25.6 per cent in 1950 to 26.1 per cent in 1951.

Civilian per capita consumption of fibers, as computed by the *Organon,* reveals that in 1951 the total was 34.7 pounds. This figure is made up of 2.1 pounds of wool, 8.3 pounds of man-made fibers, and 24.3 pounds of cotton. The 1951 figure was 1.9 pounds below the average for the five years 1946-1950. In this same comparison, however, the 1951 wool figure was less than half the previous five-year average and was the lowest figure since the 1.8-pound average in 1934. Cotton per capita consumption at 24.3 pounds was only slightly lower than the 1946-1950 average. Consumption of the man-made fibers declined from the record 9.6 pounds in 1950 to 8.3 pounds last year but still was above the 7.4-pound average of 1946-1950.

Acetate Colors For Dyeing Dynel Cited

An increasingly large volume of dynel dyeing today is being done with the acetate type colors because of the simplicity with which they can be applied and their generally good fastness properties, T. A. Field, Jr., research and development department, Carbide & Carbon Chemicals Corp., South Charleston, W. Va., told the Southeastern Section, American Association of Textile Chemists and Colorists, at its Spring meeting last month in Talladega, Ala. Dyeing of dynel and some of the other acrylic fibers has reached the state where it is commercially practical, Mr. Field declared. In selecting dyes for use with dynel, he noted, "we are not forced to favor one class over another unless particular benefits are derived from that class."

More than 125 textile chemists and suppliers attended the technical session and banquet. S. Jack Davis, Chemstrand Corp., Decatur, Ala., formerly of the research division, Callaway Mills Co., LaGrange, Ga., chairman of the Southeastern Section, presided at the afternoon technical session and the banquet held in the Purefoy Hotel. Marvin Youngblood, Wehadkee Yarn Mills, Talladega, was program chairman and introduced the speakers.

Commenting on the use of acetate-acid dye mixtures, Mr. Feild continued: "Our practice of dyeing dynel with mixtures of acid and acetate type dyes has caused many in the industry to raise their eyebrows. This is definitely a case where we have violated the rules to accomplish an end. A word of explanation is therefore in order.

"The acetate yellow dyes have outstanding light fastness on dynel and are superior to the acid yellows. The acid blue dyes on the other hand, when dyed by the cuprous ion technique, usually build up better and have better light fastness than the acetate blues. It was only natural therefore to try to combine these types.

"As might be expected, at first we had a great deal of trouble, but as a result of this trouble progress was made;

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the 'Controlled Addition of Copper' technique for applying acid dyes was developed as a result of this trouble. The method permits the practical use of mixtures of acetate and acid dyes in the dyeing of dynel.

"In using such mixtures the fiber is dyed at the boil with the two types of color present usually without the need of a swelling agent. After 20 minutes the dye-bath pH is adjusted to a value of six and a cold mixture of copper sulfate and zinc formaldehyde and sulfoxylate is dripped into the boiling bath to exhaust the acid dye. Further additions of either acetate or acid dye may be made to correct for shade since excesses of copper have been avoided."

The microdyeoscope makes possible the continuous observation of microscopic phenomena associated with the dyeing of textile fibers in normal dyeing practice, Henry E. Millson, assistant director of application, American Cyanamid Co., Calco Chemical Division, Bound Brook, N. J., told the group.

Francis Webster, F. H. Ross & Co., Charlotte, N. C., reported on plans for the Southeastern Section's annual outing to be held June 6 and 7 at Radium Springs, Ga. All hotel reservations are to be handled directly by the hotel, the group was advised.

Problems on starch will be the subject of the next paper for the intersectional contest at the A.A.T.C.C. national convention, it was made known. Dr. Walter C. Carter and the student chapter at the A. French Textile School, Georgia Tech, also are assembling a paper to be presented in the annual inter-school research competition to be held at Clemson College, April 26.

It was announced that the Southeastern Section's third meeting will be held in Atlanta on Sept. 13.

Group Inspects Whitin Research Building

Approximately 50 members of the American Association of Textile Technologists visited the Whitin Machine Works' research building in Whitinsville, Mass., recently. The group was headed by President George H. Hotte, A. M. Tenney Associates, New York City and Paul Platzman, *Textile Industries,* New York City, chairman of this field trip.

The group traveled by train from New York to Providence, R. I., then by chartered bus to Whitinsville. R. J. McConnell, vice-president and other Whitin officials welcomed the group upon arrival and members of the Whitin sales force assisted in conducting them thru the extensive display areas in the research building to inspect over 50 prototype machines in actual operation.

Following the inspection, the group was taken to the Whitinsville Golf Club as guests of the Whitin Machine Works returning later to Providence by bus. After staying overnight in Providence the group visited the nearby Bachmann-Uxbridge Worsted Mills in Uxbridge, Mass.

Duck, Webbing Purchases To Be Advertised

The New York Quartermaster Procurement Agency announced recently that all remaining procurement of duck and webbing during the fiscal year ending June 30, 1952, will be made under advertisements for bids. Announcement of purchases under this program will be made by the procurement agency with the issuance of invitations to bid.

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Program For T.Q.C.A. Parley April 3-4

Quality control engineers will view the latest in textile testing equipment April 3-4 at the Spring meeting of the Textile Quality Control Association to be held at the A. French School of Textiles, Georgia Institute of Technology, Atlanta.

The program for the meeting follows: Thursday—9:30-10:25 a.m., keynote, "Significance of Quality Control in Finished Goods" by Carl R. Harris, vice-president of Erwin Mills, Inc., Durham, N. C.; 10:30-11:25 a.m., "Applied Statistical Quality Control" by Norman H. Chandler, research physicist, Thor Mills, Canada; 11:30-12:25 p.m., "Quality Control From Customer's Point of View" by Lawson W. Turner, Jr., vice-president of N & W Industries, Lynchburg, Va.; 2-2:55 p.m., "Tar Spots and Quality Control" by Dr. Jack Compton of the Institute of Textile Technology, Charlottesville, Va., and R. Hobart Souther of Cone Mills Corp., Greensboro, N. C.; 3-3:55 p.m., "Application of Fiber Fineness to Quality Control" by Joseph L. Delany, superintendent of Joanna (S. C.) Cotton Mills and president of the Southern Textile Association; 4-4:30 p.m., business session.

Friday: 9-9:55 a.m., "Effect of Moisture on Capacitance of Type Evenness Tester," report of Task Group E-202 T.Q.C.A. presented by Dame S. Hamby of the North Carolina State College School of Textiles; 10-10:55 a.m., "Advance Thinking in Textiles" by Dr. H. F. Scheifer of the N. C. State College School of Textiles; 11-11:55 a.m., "Instrumentation in Quality Control" by Arthure E. West of American Viscose Corp., Marcus Hook, Pa.; 12-12:55 p.m., "Some Actual Functions of A Quality Control Department" prepared by the executive committee and presented by W. A. Thomason, Jr., of Saco-Lowell Shops, Charlotte, N. C.

The afternoon session Friday will be devoted entirely to the exhibit of textile testing equipment. Engineers will be on hand to demonstrate each piece of equipment. Some of the latest developments will be shown for the first time at this show.

Included among exhibitors are Anderson Machine Shop, Brabender Corp., Brush Development Co., Carbomatic Corp., Fielden Instrument Co., Saxl Instrument Co., Scott Testers, Custom Scientific Instrument Co., Sheffield Corp., Special Instrument Laboratory, Southern Scientific, Standard Mill Supply, Inc., Uster Corp., Watson & Desmond, Wyzenbeek & Staff, Inc.

A.S.M.E. Textile Division Will Reorganize

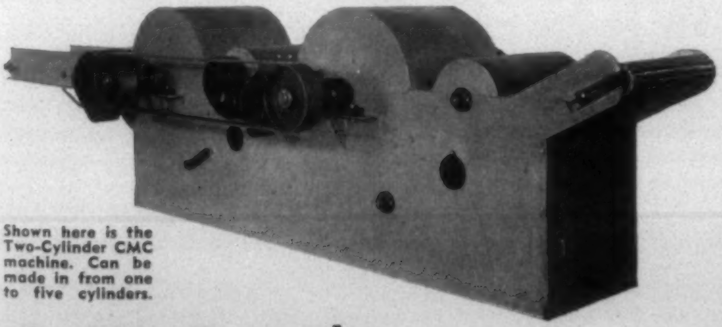
Plans for reorganization of the textile division of the American Society of Mechanical Engineers were announced March 12 following a meeting of representatives of the group in Greenville, S. C. Previously the division has been made up almost entirely of New England members who now want to bring more Southern members into the division and give recognition to the textile engineering profession.

A group of 20 will be appointed from the South, part from A.S.M.E. membership and part from non-members. A similar group will be appointed from the Northeast and the two will form a nucleus for the reorganization, Chairman F. D. Snyder of Boston, Mass., stated. He said that under the liberal membership requirements of the A.S.M.E. any engineer in or working with the textile industry would be qualified to become a member of A.S.M.E. and associated with the textile division.

Executives Honored For Service To U. S.

"Certificates of Service" honoring 188 U. S. businessmen who have served without compensation to aid the government's defense efforts were presented by Secretary of Commerce Charles Sawyer at the Mayflower Hotel March 12. Secretary Sawyer said that through the method of recruiting men from industry "the government has been very fortunate in establishing a stockpile of experienced management talent upon which we can draw again in time of great emergency."

Robert T. Stevens, of J. P. Stevens & Co., Inc., chairman of the Business Advisory Council, lauded the services of the businessmen honored. Mr. Stevens also praised Secretary Sawyer for "seeing the need clearly" for close co-



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operation between government and industry in asking the Business Advisory Council to help recruit the advisers from the ranks of industry. Manly Fleischmann, administrator of Defense Production Administration and Henry H. Fowler, of the Department of Commerce's National Production Authority, also praised the businessmen receiving certificates.

Among those honored were 24 representing the textile and allied industries: Frederic Arden of Mathieson Chemical Corp., Baltimore, Md.; Harold J. Carr of Owens-Illinois Glass Co., Toledo, Ohio; Sollace B. Coolidge, Jr., of Sherwin-Williams Co., Cleveland, Ohio; James H. Crawford of General Electric Co., Bridgeport, Conn.; Francis J. Curtis of Monsanto Chemical Co., St. Louis, Mo.; Donald M. Davidson of Fafnir Bearing Co., New Britain, Conn.; Ralph B. Elliott of E. I. du Pont de Nemours & Co., Niagara Falls, N. Y.; David A. Criffith of Allis-Chalmers Mfg. Co., Pittsburgh, Pa.; Robert M. Hatfield, Jr., of Combustion Engineering-Superheater, Inc., New York, N. Y.; Carl L. Ipsen of General Electric Co., Schenectady, N. Y.; Maurice G. Jewett of Chain Belt Co., Milwaukee, Wis.; Sidney K. Lamden of Dayton (Ohio) Rubber Co.; Thomas J. Martin of Monsanto Chemical Co., Springfield, Mass.; Louis M. Newell of Draper Corp., Hopedale, Mass.; Thomas S. Nichols of Mathieson Chemical Corp., Baltimore; Harry W. Robb of General Electric Co., Schenectady; Walter E. Schirmer of Clark Equipment Co., Buchanan, Mich.; Walter C. Skuce of Owens-Corning Fiberglas Corp., Toledo, Ohio; George H. Sollenberger of Rohm & Haas Co., Philadelphia, Pa.; Edwin Stein of Stein, Hall & Co., Inc., New York, N. Y.; Richard S. Wharton of Hewitt-Robins, Inc., New York, N. Y.; Adolph G. Abramson of SKF Industries, Philadelphia, Pa.; William W. Shoaf of Stowe Mills, Inc., and Pharr Worsted Mills, McAdenville, N. C.; Robert Wardle, Jr., of Georgia Power Co., Atlanta, Ga.

Ciba's Vat Dye Plant Nearing Completion

Ciba's new plant at Toms River, N. J., for which ground was first broken in the Spring of 1949, is rapidly nearing completion on a 1,200 acre tract carved out of the central New Jersey virgin pine belt. Confronted with repeated delays in construction almost from the beginning because the Korean hostilities began shortly after work was started by Ciba, the ensuing critical shortages in essential structural material and new equipment for the Ciba plant now have gradually been overcome so that a definite completion date has been set for 1952. The new Toms River Plant is not only entirely Ciba in conception, design, engineering, equipment and ownership but will be operated exclusively by Ciba upon completion.

Because of the accessible location, Toms River being close to and from both New York and Philadelphia areas by the new New Jersey turnpike, expanded dyestuffs research and technical service facilities will be important adjuncts to the production operations.

Philip Kronowitt, Ciba's chief engineer at Toms River, who has directed the entire project ever since the blueprint stage, sums up the status of operations as follows: "The accelerated progress of recent months is due entirely to the expediting of many of the materials and equipment essential to our plans and because we have kept all other work moving as rapidly as possible. This has enabled us to overcome a considerable amount of the lost time that originally set our time table back almost nine months. It is now possible, in light of recent progress, for us to inform the industries who will benefit directly from the resources of Ciba's new vat dyes plant that we should be in the position to initiate production at the Ciba Toms River Plant before the end of the year."

Regulation Clarifies Fringe Benefits

A clarification as to what may be included in fringe labor costs for primary cotton textile manufacturers was provided Feb. 27 by the Office of Price Stabilization. Before the Feb. 27 action (Ceiling Price Regulation 37, Amendment 4, effective March 3, 1952), the items going into fringe labor costs were not completely spelled out in Section 17 (c) of the cotton textiles regulation. This gave rise to misunderstanding in the industry as to the extent of these costs recognized in the regulation for purposes of computing textiles ceilings.

Under the recent clarification, the following are fringe labor costs which may be figured in textile manufacturers' direct labor costs: employee health, welfare and insurance plans; pension contributions for current work; paid vacations and paid holidays; and, benefits including payments required under the Federal Insurance Contributions Act, the Federal Unemployment Tax Act and any state or local unemployment or compensation laws.

Indian Dyestuff Plant Opens This Month

Long dependent on imported dyestuffs, the Indian textile industry will have its own major source of supplies beginning this month. This was indicated in the announcement by American Cyanamid Co. officials that they are cooperating with Indian financiers, including Indian cotton textile interests, in opening a dyestuff and pharmaceutical plant at Bulsar, near Bombay, in March.

The 20 to 25 dyestuffs which will be manufactured at the outset have been selected because of their wide use in mills and bazaars. They are intended not only for dyeing cotton but also for wool, paper, synthetic fibers and other purposes. It is intended to enlarge the line of dyestuffs from time to time under the 20 year plan for development of the Indian chemical industry.

As important as the economic effects of this development will be upon Indian industry, a feature engaging world attention is the life saving potential of the new industry. Along with the dyestuffs, enough sulfa drugs will be produced to cure most of the infectious diseases found in India.

Sharing interest with these factors is the farseeing "business statesmanship" which made possible merger of Indian capital and technical "know-how" of the American Cyanamid Co. to create the Indian company, Atul Products, Ltd. Under this arrangement, 90 per cent of Atul's capital is subscribed by India's bankers and businessmen.

American Cyanamid put up ten per cent at the request of the Indians as a tangible token of its serious interest in Atul's 20 year program for development of a full scale Indian chemical industry aimed at making the country independent of outside supply sources for its major needs. At the beginning, American Cyanamid not only offers technical assistance and personnel but is to provide some raw materials.

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the project, which is expected to be of substantial aid in improving our nation's relations with India, is thus explained by S. C. Moody, vice-president and director of the American Cyanamid Co. who originated the idea in 1946: "If we can help others help themselves and thereby increase the standard of living by even a fraction of a per cent, we automatically enlarge our markets and can properly share some of the resulting benefits."

Production of dyestuffs will be of substantial aid economically to India, and the life saving possibilities of the sulfa drugs, natural teammate of the dyestuffs because both derive from coal tars, will contribute most to the country's health. Sulfadiazine, which has proven its effectiveness against plague, will go into production first. Folic acid, a powerful antidote to the anemias and malnutrition which sap the energies of millions in India, and aureomycin will be produced as soon as sulfadiazine is in production.

The plant, at the outset, will save India $500,000 a year in foreign exchange which would have to be released for these items. These savings will expand many fold as the plant moves into full production.

In line with the aim of aiding India to build its own industry, a dozen Indians have been trained during recent months in the U. S. in the work. With the aid of two American engineers and 200 or more Indian employees, they will operate the plant and continue the training of more young Indian university graduates in industry techniques.

"It's reminiscent of our start in 1915 when the United States had to begin almost at scratch to produce the dyestuffs and pharmaceuticals formerly imported from Germany," Mr. Moody recalls.

Council Reports Rise In Injury Rate

The average textile worker was more susceptible to injurious accidents in 1951 than he was in 1950. This was revealed by the textile section of the National Safety Council in reporting results of its safety contest for 1951.

The safety council reported: "During 1951, contestants reported a total of 342,278,000 man-hours and 2,502 reportable injuries. Compared with the 1950 contest this represents an increase of nine per cent in the reported exposure and an increase of 25 per cent in injuries.

"Contestants in Division I operated 173,532,000 man-hours during the past year which was 18 per cent more than a year ago. There was a tremendous increase in the number of injuries reported; 1,295 injuries, an increase of 62 per cent. Division II reported 1,207 injuries occurring during the 168,746,000 hours that were worked. In comparison with the totals reported last year, injuries have gone up 15 per cent while the exposure increased only two per cent.

"Basing our computations on the experience of companies which were enrolled in both the 1950 and 1951 contests, the final rate for the 1951 contest (7.31) was 13 per cent higher than a year ago."

School Of Textiles Plans Open House

The North Carolina State College School of Textiles will hold its third annual Open House to be sponsored by the Tompkins Textile Council on Saturday, April 5. The Open House is run entirely by students who will present displays and conduct tours throughout the day-long affair. Seven departments will present programs and compete for a cup to be awarded for the best demonstration. The knitting department won this cup last year and will be defending it against the yarn manufacturing, weaving and fabric design, wool, synthetics, chemistry and dyeing, and a combination of testing, instrumentation, and microscopy departments.

Invitations are being extended to all people interested in textiles and to high school seniors from all of North Carolina.

Representatives of the various manufacturing organizations that attend will have an opportunity to evaluate the training that their future employees are receiving. The opportunities offered are likely to encourage visiting high school students to consider textiles as their career. Returning graduates will be greatly impressed by new machinery installations, and by the many new facilities such as the beautiful new library, the comfortable student lounge, the spacious auditorium, and the "Shuttle Inn" snack bar with the Cramer Room for seniors and faculty. From the every day consumer point of view, the general public will probably find the conversion of fiber into cloth intriguing.

The student chapters of Phi Psi, Delta Kappa Phi, A.A.T.C.C., and Sigma Tau Sigma are assisting in sponsoring this event.

Importance Of New Traverse Guide Cited

Du Pont spokesmen at the company's exhibit at the fifth National Plastics Exposition, Philadelphia, Pa., disclosed that a small machine part of molded nylon plastic, a fraction of an inch thick and less than two inches in diameter, literally made possible the development of an ultra high-speed process in the textile industry. The part, a traverse guide, carries yarn back and forth as it is being wound on a spool, like the level winding device on a fishing reel, but at very high speed, stopping and starting at split-second intervals.

Severe stresses induced by the action caused the complete failure of all metal guides in from two to three days. Nylon guides, because of the plastic's lightness and toughness, gave many months of service, Du Pont experts said. The textile industry, first to adopt nylon parts for production equipment, now has some 80 different ones in operation, many running without lubrication. Absence of lubricating oil is cutting down yarn spoilage while the longer service-life of nylon is reducing maintenance costs, it was pointed out.

Textile School Scholarships Established

Four-year scholarships have been established in the North Carolina State College School of Textiles by Collins & Aikman Corp. Announcement of the new scholarship program was made recently by John M. Dempsey, resident manager of the corporation's Ca-Vel plant in Person County, N. C., and Harry J. Blanchard, resident manager of the Norwood, N. C., plant. They said that a fund of $2,400 has been set up at the college to create the scholarships.

Formal presentation of the fund to the institution was made jointly by Dempsey and Blanchard. Accepting the fund on behalf of State College were J. G. Vann, business manager and assistant controller of the institution, and Dean Malcolm E. Campbell of the college's school of textiles.

Mr. Dempsey and Mr. Blanchard stated that the scholar-

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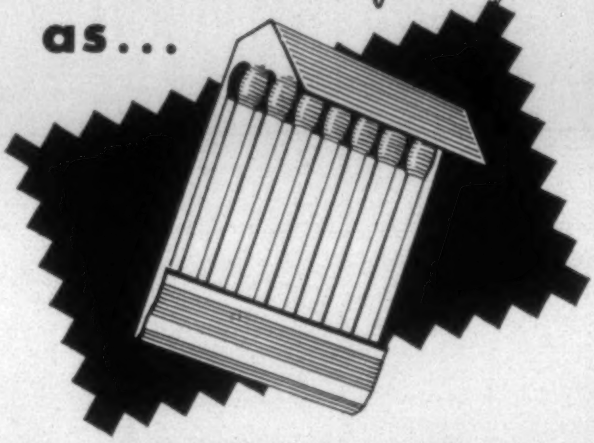

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ships, to be used primarily by the children of employees of the Ca-Vel and Norwood plants, will amount to approximately two-thirds of a year's expenses for a student. They explained that the children of employees of both industrial plants would compete for the yearly scholarships but added that the scholarships would be awarded to other students in the communities "if, in any year, there are no eligible applicants from the families of employees."

Similar scholarships are to be awarded by Collins & Aikman Corp. at the Philadelphia Textile Institute in Philadelphia, Pa., and the Rhode Island School of Design in Providence, R. I. The company officials pointed out that at the end of four years 12 students will be enrolled at the three institutions under the company's new scholarship program.

Establishment of a Graduate Fellowship in the School of Textiles at North Carolina State College by the Celanese Corp. of America was announced recently by Dean Malcolm E. Campbell. Arrangements for the creation of the fellowship with the Celanese Corp. were made by Dr. Herbert F. Schiefer, director of research in the School of Textiles at North Carolina State College, and Prof. Henry A. Rutherford, head of the department of textile chemistry and dyeing at the college.

Dean Campbell said the primary purpose of the fellowship will be "training of students for a research profession in textiles." The fellowship, he stated, will carry an annual stipend of $1,800 with an additional amount to the school of textiles for tuition and fees, and for materials, supplies and equipment used by the recipient of the fellowship in the conduct of textile research. The nature of the research undertaken by the fellow shall be in the field of textile chemistry or textile physics.

Dean Campbell explained that the fellowship is for graduate study and research in the school of textiles and will lead to the degree of Master of Science in Textiles. It is open to qualified students who have obtained degrees not only in textiles, but also holders of degrees in chemistry, chemical engineering, mechanical engineering physics, and other scientific and engineering courses.

The appointment, he continued, may be continued for a second year, if necessary to complete the work for the graduate degree. The Celanese Corp. may at its option continue this fellowship beyond the period of two years, or it may establish more than one fellowship during the same period. The recipient of the award will be chosen and approved by the school of textiles and the Graduate School of North Carolina State College.

Application forms for the Celanese Fellowship may be obtained from Dr. D. B. Anderson, associate dean, the Graduate School, North Carolina State College, Raleigh, N. C., or from the school of textiles. Interested and qualified candidates should submit their applications immediately, college officials said.

Faster Delivery On Marhen Controls

Deliveries on the control equipment used in the Marhen process of vat dyeing, whereby the reduction potential of the dyebath is continuously measured, have greatly improved recently and can now be had in about eight weeks, it was brought out during discussion at the meeting of the South Central Section, American Association of Textile Chemists & Colorists, last month in Chattanooga, Tenn.

W. E. Ridley, sales manager of the textile division of

Foxboro (Mass.) Co., led a panel discussion with H. A. Webb of General Dyestuff Corp., following the reading by the latter of a paper on the process by Dr. D. E. Marnon, co-discoverer with J. H. Hennessey.

Don Gunther of Burkhart-Schier Chemical Co., Chattanooga, read the paper, "Toward A Simpler Mechanical Means of Judging Hand," presented by the section at the national convention in New York last Fall. Compilation of specific reduction potentials to be used with different vat dyestuffs to obtain best results is under way by General Dyestuff Corp., as rapidly as such information can be gathered from mill runs by the industry, it also was brought out.

R. W. Freeze of American Aniline Products, Inc., Chattanooga, section secretary, made known the next meeting would be on May 17 in Chattanooga.

Program Listed For Fiber Society Parley

The tentative program for the Spring meeting of the Fiber Society, to be held April 16-17 at Clemson, S. C., has been announced by John T. Wigington, technical service division, American Cotton Manufacturers Institute, executive secretary of the society.

Topics and speakers will include: "Characterization of Warp Streaks in Woven Fabrics," E. H. Olson, E. I. du Pont de Nemours & Co., Inc.; "Some Factors Influencing Yarn Tension at Warping," W. G. Faw and R. F. Dyer, Tennessee Eastman Corp.

"Relation Between Certain Defects in Dyed Fabrics and Mechanical Damages in Wet Processing," K. S. Campbell, D. M. Cates and H. A. Rutherford, North Carolina State College School of Textiles; "Mechanical Conditioning of Textile Fibers," George Susich, Research and Development Laboratory, Army Quartermaster Corps.

"Reactions of Textile Fibers With Salt Solutions," H. J. White, Jr., Textile Research Institute, Inc.; "Changes in Properties of Cotton Fiber Under the Influence of Micro-Organisms and of Weathering," P. B. Marsh, T. Kerr and H. D. Barker, U. S. Department of Agriculture.

"The Response of Cotton Fibers to Very High Compression Stresses," contributed from the laboratories of the Institute of Textile Technology, by W. F. Bussee, Du Pont and "Application of High Compression Stresses to Textile Fibers," H. J. Kolb, W. F. Bussee, F. W. Billmeyer and H. E. Stanley, Du Pont; "Measurement of Luster," W. A. O'Brien and J. S. Campbell, Celanese Corp. of America.

N.A.T.M.A. Changes Name; Elects Bolton

The annual meeting of the National Association of Textile Machinery Manufacturers was held recently at the Sheraton Plaza Hotel, Boston, Mass. Among items acted upon was the changing of the name of the association to American Textile Machinery Association, effective immediately. The reason given for the change was simply to have the name of the association more concise and easier to handle in correspondence, publicity and related matters.

The election of officers and directors took place, and the officers for the ensuing year are as follows: president, J. Hugh Bolton, Whitin Machine Works, Whitinsville, Mass.; vice-president, Frederick W. Howe, Jr., Crompton & Knowles Loom Works, Worcester, Mass.; treasurer, Samuel F. Rockwell, Davis & Furber Machine Co., No. Andover,

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Mass.; secretary, Max F. Thompson, Whitin Machine Works.

The directors of the association are as follows: Mr. Bolton; Mr. Howe, Jr.; Mr. Rockwell; W. Frank Lowell, Saco-Lowell Shops, Biddeford, Maine; Thomas H. West, Draper Corp., Hopedale, Mass.; Roy G. Ross, Barber-Colman Co., Rockford, Ill.; James H. Hunter, James Hunter Machine Co., No. Adams, Mass.; J. Ebert Butterworth, H. W. Butterworth & Sons Co., Philadelphia, Pa.; Robert Leeson, Universal Winding Co., Providence, R. I.

William K. Child, vice-president in charge of sales of the Draper Corp., was chosen by the officers and directors to be chairman of the committee planning the 1954 American Textile Exhibit in Atlantic City, N. J.

Du Pont Plans New Haskell Laboratory

Plans for construction of a new $2,000,000 Haskell laboratory of industrial toxicology near Newark, Del., were announced March 4 by the Du Pont Co. This will provide enlarged facilities for the company's industrial toxicology laboratory which has been located at the Du Pont experimental station at Wilmington, Del., since 1935. The Haskell laboratory rigidly tests Du Pont products and manufacturing processes to eliminate every potential hazard to employees and customers.

The new facilities have become necessary as this work has steadily expanded with the increase in the company's operations. The new laboratory will also enable the company to broaden its basic research on two major scientific questions: the causes of industrial fatigue and the factors that make clothing comfortable.

Work of the Haskell laboratory is devoted to research on potential industrial hazards associated with the products and processes of Du Pont's manufacturing departments. Particular emphasis is placed on research that will reveal the very early physiological changes caused by the action of chemical compounds, in order that adequate preventive measures may be set up in the company plants. Information thus developed is used also to instruct customers on the safe handling of Du Pont products. In addition, results of fundamental studies undertaken in this laboratory are made available to other companies and to interest research workers in the fields of hygiene and medicine.

As a result of this work, some promising new products have been changed, or even abandoned, because of possible hazard to users. In other cases, manufacturing methods have been changed at great cost to protect employees. The laboratory was established in 1935, formalizing much of the company's work to eliminate hazards to employees, customers, and the general public which goes back 150 years to the founder.

Before nylon was introduced commercially, it was skin tested first on guinea pigs, then on 200 humans, and finally a wear test was conducted on 5,000 people.

The laboratory spotted possible trouble when plans for the Orlon acrylic fiber plant at Camden, S. C.,—one of the company's newest—were on the drawing board. The process called for a heat transfer agent that had been known to seep through gaskets and contaminate the air. So the engineers installed a special ventilation system to eliminate any chance of employees being harmed.

A special all-weather room at the new laboratory will enable researchers to extend and improve their techniques on one of the newer phases of its work: research on causes of fatigue among employees. It will also be used to assist the textile fibers department in fundamental research on the basic factors of clothing comfort. One of the few such installations in the world, this room will provide almost any kind of weather condition imaginable. In it, the scientists will be able to maintain temperatures ranging from 20 below zero to 150 above, plus wind velocities up to 20 miles per hour.

The same room will be used to contribute physiological studies to the program of the textile fibers department on clothing comfort. This is a broad, fundamental program intended to discover why fabrics make people comfortable or uncomfortable.

The physiological end of the research can be carried out there under controlled climatic conditions. In the all-weather room, scientists will be able to create hot, muggy climates, stir up chilling breezes, plunge into dry desert heat, or stir up some frigid Winter. With this control, they will be able to measure precisely the bodily changes caused by different atmospheric conditions in relation to types of fabrics worn by individuals. They will study such things as the effect of various fabrics on blood pressure, pulse, and perspiration of people under different conditions of climate.

Continuance Of Controls Said Unnecessary

Government interference in the form of "unnecessary" and "costly" price controls is blocking the textile industry's recovery from a depression that threatens increasing hardship among thousands of people, Congress was told recently. Testifying before the Senate banking and currency committee, which has been conducting hearings on extension of the Defense Production Act, Ellison S. McKissick of Greenville, S. C., chairman of the mobilization committee of the American Cotton Manufacturers Institute, asserted:

"In our industry, the disease is deflation. We are asking discontinuance of a treatment that was prescribed for inflation." The A.C.M.I. executive, who is president of Alice Mfg. Co. of Easley, S. C., described 11 months of business decline, collapsed values, mill closings and forced layoffs of workers as conditions in the industry which have turned out to be the "exact opposite" of the results originally sought by Congress in creating the Defense Production Act.

"We don't have to base our statements on opinion or guess work," he said, pointing to official government data

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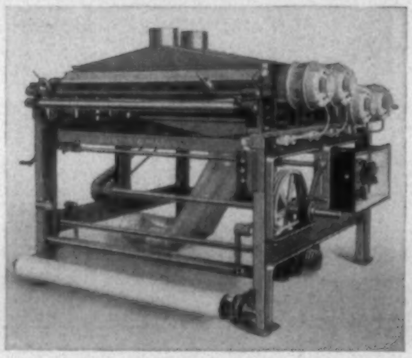

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on textile unemployment which now exceeds 133,000 persons out of work, price drops averaging 27 per cent below levels of a year ago, a 54 per cent loss in mill earnings, along with decreases in yardage output and amounts of fiber consumed by the mills.

"The facts in your hands fully support our conviction that controls are not only unnecessary in an industry whose products have been ranging from 26 to 28 per cent below ceilings for months, but that the continuation of these controls is a major cause of our industry's depression," Mr. McKissick said. He added:

"We wonder to what purpose must these consequences be suffered longer and whether it is necessary to prolong the paralysis of actual deflation in order to curb a hypothetical inflation where it has not existed even as a possible threat for many months." The connection between controls and the textile depression is "direct, plain and simple," he said, explaining that the industry must be able to schedule all its operations in advance in order to operate efficiently and that this cannot be done unless customers follow their normal pattern of buying in advance.

Enactment by the Congress of statutory provisions for suspension or abolition of price controls, which have outworn their usefulness in textiles and now constitute only a threat of a permanent government bureaucratic domination of business, was urged upon Chairman Burnet R. Maybank of the Senate banking and currency committee recently by W. Ray Bell, president of The Association of Cotton Textile Merchants of New York.

Textile merchant firms, Mr. Bell stated in a letter to Senator Maybank, are concerned over continuation of controls "long after their need has passed and their purposes have been effected. Participation of the federal government in the activities of free enterprise has doubtful merit under any circumstances. In markets that have thoroughly routed inflationary forces and are now struggling with problems of deflation, there is no reasonable excuse for the maintenance of supervisory bureaus with their endless requirements of superfluous reports and records."

Point by point, Mr. Bell cited the full accomplishment of the purposes established by Congress in Title IV of the Defense Production Act, indicating that the eight objectives of Congress of preventing inflation, assuring defense appropriations were not dissipated, stabilizing living costs, eliminating speculation and hoarding, protecting fixed income consumers, preventing interference with mobilization, balancing purchasing power and supplies of consumer goods, and protecting private savings had all been attained by exceptional productive effort and the long deflation of textile values. Only the ninth objective, that of "preventing a future collapse in values," remained, and this had boomeranged in textiles.

The industry, he stated, has been in a deepening deflation with falling prices, shortened work-weeks, shutdowns, un-

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employment, and a contracting market for cotton producers. Prices based on the Department of Agriculture average of 17 constructions show a drop of 25 per cent in a year. Even more severe, mill margins, representing the difference between cotton cost and cloth price, had contracted 42 per cent and nearly to the depression point of the post-war years. Many goods are at, or even below, cost of production. Competition has been as keen on military as civilian orders, and awards for a typical military fabric have fallen from a range of 98 cents to $1.27 in January, 1951, to 64 cents to 82 cents in February, 1952.

The Office of Price Stabilization as long ago as October admitted that no signs of inflation existed in textiles, but that a "wait and see" policy was to be followed. Continuance of control for the sake of control, or because of some theory of what might happen in the future, could mean the permanent riveting of the system of government controls upon industry, Mr. Bell said. He appealed to the banking committee to prevent such a development by removing or suspending controls by legislative enactment now.

Spinners' Unfilled Orders Off 37 Per Cent

Unfilled orders on the books of carded cotton sales yarn spinners were reduced another eight per cent during February and at the beginning of the current month were 37 per cent below the backlog of March 3 a year ago, the Textile Information Service reports.

Shipments by spinners were slightly in excess of production during February and inventories were lowered four per cent. As of March 1 total yarn stock, including yarn made for future deliveries against unfilled orders, amounted to 1.495 weeks' production. This compared with stocks equal to 1.593 weeks' production on Feb. 2, 1952, and with inventories amounting only to one-third of a week's production on March 3 last year.

Unfilled orders on March 1, 1952, were equal to ten weeks' production and were 6.68 times the stocks on hand. On Feb. 2, the backlog of unfilled orders was equal to 11.12 weeks' output and was 6.98 times stocks on hand. At the beginning of March in 1951, this backlog was equivalent to 15.29 weeks' production and was 45.94 times the stocks on hand.

According to statistics of the Carded Yarn Association covering reports from approximately 1.4 million member spindles, production in the week ended March 1 consisted of 26.7 per cent knitting yarn, 57.3 per cent weaving yarn, and 16.0 per cent all others. On Feb. 2 the percentages were 27.2, 55.7 and 17.1 respectively and March 3, 1951 they were 30.6, 57.3 and 12.1.

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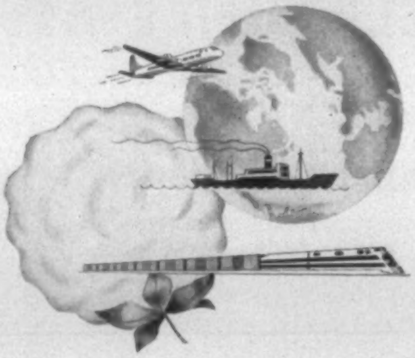

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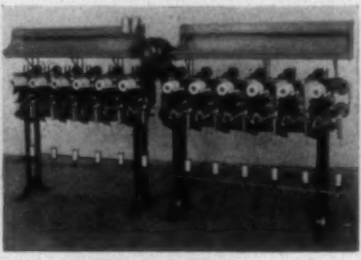

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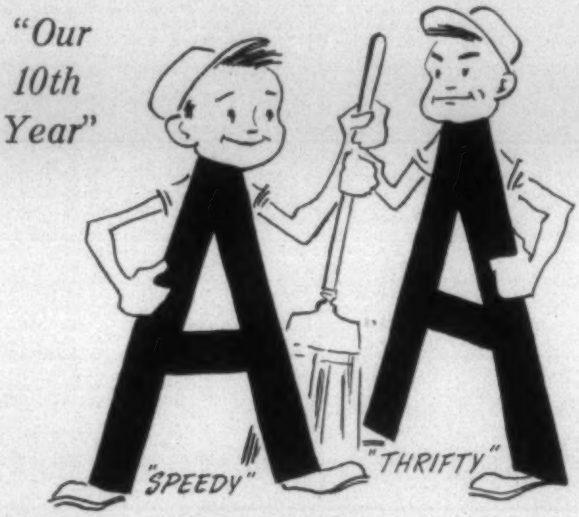

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RHOADS & SONS, J. E., 35 N. Sixth St., Philadelphia 6, Pa. Sou. Office: J. E. Rhoads & Sons, 88 Forsyth St., S.W., Atlanta, Ga., P. O. Box 4305. C. R. Mitchell, Mgr. Sou. Reprs.: J. Warren Mitchell, P. O. Box 1539, Greenville, S. C.; A. S. Jay, P. O. Box 687, Sylacauga, Ala.; J. T. Hoffman, P. O. Box 4305, Atlanta, Ga.; L. H. Schwoebel, 615 Roslyn Rd., Winston-Salem, N. C.; Textile Supply Co., 301 N. Market St., Dallas, Tex.

RICE DOBBY CHAIN CO., Millbury, Mass. Sou. Reprs.: R. E. L. Holt, Jr., Associates, P. O. Box 1474, Jefferson Bldg., Greensboro, N. C.

ROBERT & CO. ASSOCIATES, Atlanta, Ga.

ROSE & CO., E. F., Maiden, N. C.

ROY & SON CO., B. S., Worcester, Mass. Sou. Office and Supply Depot: 1623 N. Tryon St., Charlotte, N. C., W. F. Crowder. Sou. Distributors: Odell Mill Supply Co., Greensboro, N. C.; Textile Mill Supply Co., Charlotte, N. C.; Textile Supply Co., Dallas, Tex.

ROYCE CHEMICAL CO., Carlton Hill, N. J. Sou. Repr.: Irving J. Royce, 2008 Belvedere Ave., Charlotte, N. C.

SACO-LOWELL SHOPS, 60 Batterymarch St., Boston. Mass. Sou. Office and Supply Depot, Charlotte, N. C., J. W. Hubbard (in charge), H. M. Walsh, W. A. Thomason, Jr., Selling Agts.; Atlanta, Ga., 101 Marietta St., Herman J. Jones (in charge), Miles A. Comer, Selling Agts.; Greenville, S. C., Woodside Bldg., C. Perry Clanton (in charge), Chas. S. Smart, Jr., Selling Agts.

SANDOZ CHEMICAL WORKS, INC., 61 Van Dam St., New York 13, N. Y. Sou. Office: 1510-12 Camden Rd., Charlotte, N. C., A. T. Hanes, Jr., Mgr.

SARGENT'S SONS CORP., C. G., Graniteville, Mass. Sou. Reprs.: W. S. Anderson, Carolina Specialty Co., Charlotte 7, N. C.; Philadelphia Repr., F. E. Wasson, 519 Murdoch Rd., Philadelphia 19, Pa.

SCHMIDT MFG. CO., P. O. Box 560, 280-292 North St., New Bedford, Mass. Sou. Plant: Greenville Belting Co., P. O. Box 59, 206 Emile Ave., Greenville, S. C.

SEYDEL-WOOLLEY & CO., 748 Rice St., N.W., Atlanta, Ga., Phone Elgin 5887, Vasser Woolley, Pres. Reprs.: John R. Seydel, V. R. Mills, A. Dillon, Atlanta, Ga.; W. L. Whisnant, Concord, N. C.; W. H. Cutts, Greensboro, N. C.; Welling La Grone, Greenville, N. C., in the Wetting and Finishing Div.; Dr. Paul V. Seydel, David Meriwether, Atlanta, Ga.; J. E. Spearman, Charlotte, N. C. Northern and Export Repr: Standard Mill Supply Co., 1064-1090 Main St., Pawtucket, R. I. (conditioning machinery and penetrants only). Southwestern Repr.: O. T. Daniel, Textile Supply Co., 1602 Cedar Springs, Dallas, Tex.

SHERWIN-WILLIAMS CO., THE, Warehouse and Office: 224 W. First St., E. H. Steger, Mgr., Charlotte, N. C. Sou. Reprs.: Guy C. Brazell, 231 Huron St., Decatur, Ga.; James E. East, 116 Tranquil Ave., Charlotte, N. C.; R. Eugene Roberts, P. O. Box 1302, Greensboro, N. C.; John W. Wheeler, P. O. Box 121, Greenville, S. C.

SIGNAL THREAD CO., INC., Chattanooga, Tenn.

SINCLAIR REFINING CO., Dist. Office, 573 W. Peachtree St., P. O. Box 1710, Atlanta, Ga., F. W. Schwettmann, Mgr., Lubricating Sales; G. R. Dyer, Mgr. Industrial Sales. Area Offices: Atlanta, Ga., Birmingham, Ala., Jacksonville, Fla., Miami, Fla., Tampa, Fla., Columbia, S. C., Charlotte, N. C., Nashville, Tenn., Jackson, Miss., Montgomery, Ala., Raleigh, N. C. Industrial Lubricating Engineers: J. M. Mathers, Columbia, S. C.; T. F. Morrison, Charlotte, N. C.; J. O. Holt, 1220 Dixie Trail, Raleigh, N. C.; W. H. Lipscomb, 414 McIver St., Greenville, S. C.; R. A. Smith, 121 Island Home Blvd., Knoxville, Tenn.; C. C. Nix, 1926 Sixteenth Ave., So., Birmingham, Ala.; T. A. Crossley, Montgomery, Ala.; L. M. Kay and H. G. Lane, 332 Eighth St., N.E., Atlanta, Ga., and H. H. Terrell, P. O. Box 131, Lakeland, Fla.

SINGLETON & SONS, RUSSELL A., Blanco, Tex. Sou. Reprs.: R. T. Hamner, P. O. Box 267, Gastonia, N. C.; Ralph Gossett, Jr., Ralph Gossett Mill Supplies, 15 Augusta St., Greenville, S. C.; James W. Heacock, 609 Hillcrest Dr., Talladega, Ala.; Paul S. Jones, 208 Lane Circle, LaGrange, Ga.; Phil Morgan, 401 S. Lewis St., LaGrange, Ga.; Julian W. Still, 1708 Peachtree St., N.E., Apt. 20, Atlanta, Ga.

SIPP-EASTWOOD CORP., Main Office and Factory, 40 Keen St., Paterson, N. J. Sou. Office: S. Fred Toll, 2116 W. Morehead St., Charlotte, N. C.

SIRRINE CO., J. E., Greenville, S. C.

SLIP-NOT BELTING CORP., Kingsport, Tenn., Otto Cox, Sales Mgr., P. O. Box 3061, Phone 4-3718, Greensboro, N. C.; E. S. Meservey, Ga. and part Ala., 1303 Clairmont Circle, Apt. 2, Phone Evergreen 6852, Decatur, Ga., Phone Dearborn 4523; G. H. Spencer, P. O. Box 1297, Gastonia, N. C., part N. C.; O. L. 'Blackie" Carter, part S. C., Box 2206, Phone 5-2111, Greenville, S. C.; T. E. Doane, part Tenn., Northern Ala., Ky., W. Va., Box 44, Phone 3100, Kingsport, Tenn.; John R. Youngblood, part N. C., Va., Maryland, Pa. and N. J., Phone 284, 1012 St. David St., Tarboro, N. C.

SMITH & SON, E. E., Gastonia, N. C.

SMITH TEXTILE APRON CO., Gastonia, N. C.

SMITH, YATES D., Gastonia, N. C.

SNAP-ON TOOLS CORP., General Offices: 3046—28th Ave., Kenosha, Wis. Branches at: 380 Techwood Dr., N.W., Atlanta, Ga., Branch Mgr., C. M. Wendell; 1209 E. 25th St., Baltimore 18, Md.; R. C. Lapp, Br. Mgr.: 915 S. Clarkson St., Charlotte 6, N. C.; G. M. Weitz, Br. Mgr., 605 E. McMillan St., Cincinnati 6, Ohio. H. E. Gage, Br. Mgr.; 2932 Commerce St., Dallas 1, Tex., C. C. Boutwell, Br. Mgr.; 1602 Walnut St., Jacksonville 6, Fla., A. B. Woodham, Br. Mgr.; 1040 Camp St., New Orleans 13, La., L. G. Melton, Br. Mgr.; 1617 W. Broad St., Richmond 20, Va., C. F. Wenderoth, Br. Mgr.

SNOWISS FUR CO., B., Lockhaven, Pa. Sou. Repr.: R. E. L. Holt, Jr., P. O. Box 1474, Jefferson Bldg., Greensboro, N. C. Tel. 2-5681 and 2-5438.

SOLVAY SALES DIVISION, ALLIED CHEMICAL & DYE CORP., 40 Rector St., New York, N. Y. Sou. Branch: 212 S. Tryon St., Charlotte, N. C.; H. W. Causey, Branch Mgr. Sou Reprs.: Earl H. Walker, High Point, N. C.; Richard Hoyt, 1216 Edgewood Ave., Jacksonville, Fla.; Robert P. Baynard, Charlotte, N. C.; Charles E. Varn, 307 Elmwood Dr., Greensboro, N. C.

SOMERVILLE-SEYBOLD DIVISION of HENLEY PAPER CO., 700 Murphy Ave., S.W., Atlanta, Ga.

SONOCO PRODUCTS CO., Hartsville, S. C.

SOUTHEASTERN SOUND & ELECTRONICS CORP., 2 Aberdeen Dr., Greenville, S. C.

SOUTHERN ELECTRIC SERVICE CO., Charlotte, Greensboro, N. C.; Greenville, Spartanburg, S. C.

SOUTHERN EQUIPMENT SALES CO., (N. C. Equipment Co.), Charlotte, N. C.

SOUTHERN SHUTTLES DIVISION, Steel Heddle Mfg. Co., Main Office and Plant, 2100 W. Allegheny Ave., Philadelphia, Pa. Greensboro Office, Guilford Bank Bldg., Box 1917, Greensboro, N. C., C. W. Cain, Mgr.; Henry P. Goodwin, Sales and Service. Greenville Office and Plant, 621 E. McBee Ave., Box 1899, Greenville, S. C., J. J. Kaufmann, Jr., V.-Pres. and Mgr. of Southern Divisions. Davis L. Batson and Sam Zimmermann, Jr., Sales and Service. Atlanta Office and Plant, 268 McDonough Blvd., Box 1496, Atlanta, Ga.; Southern Shuttles, a division of Steel Heddle Mfg. Co., 621 E. McBee Ave., Greenville, S. C., J. J. Kaufmann, Jr., Mgr.

SOUTHERN SPINDLE & FLYER CO., Charlotte, N. C.

STAHMER WOODEN SOLED SHOE CO., Davenport, Iowa.

STALEY MFG. CO., A. E., Decatur, Ill. Sou. Offices, 2000 Rhodes-Haverty Bldg., Atlanta, Ga. Wm. H. Randolph, Jr., Southeastern Mgr.; W. N. Dulaney, Asst. Southeastern Mgr. Sou. Reprs.: L. A. Dillon, 815 Third St., Durham, N. C.; H. A. Mitchell, Montgomery Bldg., Spartanburg, S. C.; W. T. O'Steen, Rt. 5, Greenville, S. C.; Walter P. Hope, 1160 Tate Drive, Columbus, Ga.

STANDARD MILL SUPPLY, INC., 2319 Hutchinson Ave., Charlotte, N. C. A. Benson Davis, V.-Pres. Repr.: J. Kenneth Sumner.

STANLEY WORKS, THE, New Britain, Conn. Sales Reprs.: G. H. Little, Harrison Bldg., Room 414, 4 S. 15th St., Philadelphia, Pa., Tel. Rittenhouse 9977; G. R. Douglas, 707 Columbian Mutual Towers, Memphis 3, Tenn., Tel. 8-7117; M. A. Hawkins, 3803 General Taylor St., New Orleans 15, La., Tel. Magnolia 5353; H. C. Jones, care The Stanley Sales Co., 410 Candler Bldg., Atlanta, Ga., Tel. Lamar 4651; G. J. McLernon, 209 Hubbard St., San Antonio 2, Tex., Tel. Travis 3653; Charles J. Turpie, Jr., 1412 Scott Ave., Charlotte, N. C., Tel. 3-7015; J. A. Dickson, P. O. Box 390, 112 Bales Ave., Phone 9-2812, Chattanooga, Tenn.; T. P. West, Jr., 10 Seminole, Dr., Greenville, S. C., Tel. 3-5932.

STEEL HEDDLE MFG. CO., Main Office and Plant, 2100 W. Allegheny Ave., Philadelphia, Pa. Greensboro Office, Guilford Bank Bldg., Box 1917, Greensboro, N. C., C. W. Cain, Mgr.; Henry P. Goodwin, Sales and Service, Greenville Office and Plant, 621 E. McBee Ave., Box 1899, Greenville, S. C., J. J. Kaufmann, Jr., V.-Pres. and Mgr. of Southern Divisions; Davis L. Batson and Sam Zimmermann, Jr., Sales and Service. Atlanta Office and Plant, 268 McDonough Blvd., Box 1496, Atlanta, Ga.; Southern Shuttles, a division of Steel Heddle Mfg. Co., 621 E. McBee Ave., Greenville, S. C., J. J. Kaufmann, Jr., Mgr.

STEIN, HALL & CO., INC., 285 Madison Ave., New York N. Y. Charlotte Office: 1620 W. Morehead St., Charlotte, N. C., F. W. Perry, Mgr., P.O. Box 809; N. C., Va. and Tenn. Repr.: W. S. Gilbert, Charlotte, N. C.; S. C. Repr.: Crawford H. Garren, P. O. Box 303, Pendleton, S. C.; Atlanta Office: 80 W. Peachtree Place, N. W., Atlanta, Ga., E. D. Estes, Mgr., 1257 Durand Drive, N. W.; Ala. Repr.: J. E. Myrick, 302 24th St., Tuscaloosa, Ala.; Ga. Repr.: Rodney Simpson, 80 W. Peachtree Pl. N. W., Atlanta, Ga.

STERLING RING TRAVELER CO., 101 Lindsay St., Fall River, Mass. Sou. Reprs.: M. H. Cranford, 135 Walnut St., Chester, S. C.; D. R. Ivestor, Clarkesville, Ga.; T. B. Farmer, Box 150, Langley, S. C.

STODGHILL & CO., Atlanta, Ga.

TERRELL MACHINE CO., THE, Charlotte, N. C. E. A. Terrell, Pres., W. S. Terrell, Sales Mgr.

TEXAS CO., THE, New York, N. Y. Dist. Offices, Box 901, Norfolk, Va., and Box 1722, Atlanta, Ga. Bulk Plants and Warehouses in all principal cities. Lubrication Engineers: P. C. Bogart, Norfolk, Va.; W. H. Goebel, Roanoke, Va.; F. M. Edwards, Raleigh, N. C.; W. P. Warner, Greensboro, N. C.; C. W. Meadors, Charlotte, N. C.; J. S. Leonard, Greenville, S. C.; F. G. Mitchell, Columbia, S. C.; L. C. Mitchum, Atlanta, Ga.; A. C. Keiser, Jr., Birmingham, Ala.; J. E. Buchanan, Munsey Bldg., Baltimore, Md.; G. W. Wood, Charlotte, N. C.; J. H. Murfee, Greensboro, N. C.; G. B. Maupin, Greensboro, N. C.; W. T. Allen, Greensboro, N. C.; C. T. Hardy, Durham, N. C.; J. G. Loudermilk, Atlanta, Ga.; A. C. Evans, Macon, Ga.; J. S. Sammons, Birmingham, Ala.; J. M. Malone, Montgomery, Ala.; H. E. Meunter, Charlotte, N. C.; C. B. Fischer, Goldsboro, N. C.

TEXTILE APRON CO., East Point, Ga.

TEXTILE LABORATORIES, Box 1396, Gastonia, N. C.

TEXTILE SHOPS, THE, Spartanburg, S. C. E. J. Eaddy.

THORNBURG MACHINE WORKS, INC., P. O. Box 186, Dallas, N. C. C. O. Thornburg and F. B. McDonald.

TIDE WATER ASSOCIATED OIL CO., 17 Battery Place, New York, N. Y. S. E. District Office, 3119 S. Blvd., Charlotte 3, N. C., K. M. Slocum, Dist.

SOUTHERN SOURCES OF SUPPLY

Mgr., Tel. Charlotte 2-3063. Sales Reprs.: L. A. Watts, Jr., 407 N. Allen Ave., Richmond, Va. Tel. Richmond 4-8944; W. R. Harper, 1806 Madison Ave., Greensboro, N. C., Tel. Greensboro 8784; L. G. Compton, Jr., No. 1 Robinson St., Elizabeth Apts, Greenville, S. C.; Tel. Greenville 2-9222.

TOWER IRON WORKS, 50 Borden St., Providence 3, R. I. Sou. Reprs.: Ira L. Griffin & Sons, Charlotte 1, N. C., Tel. Charlotte 4-8306.

U S BOBBIN & SHUTTLE CO., Lawrence, Mass. Sou. Offices: Charlotte, N. C.; Greenville, S. C.; Johnson City, Tenn. Texas Repr.: O. T. Daniel, Textile Supply Co., Dallas, Tex.

U. S. RING TRAVELER CO., 159 Aborn St., Providence, R. I. Sou. Office and Sales Room: 1903 Augusta Rd., Greenville, S. C. Sou. Reprs.: William P. Vaughan and Wm. H. Rose, P. O. Box 1048, Greenville, S. C.; Oliver B. Land. P. O. Box 1187, Athens, Ga.; Harold R. Fisher, P. O. Box 83, Concord, N. C.

UNITED STATES TESTING CO., INC., 1415 Park Ave., Hoboken, N. J. Sou. Branches: United States Testing Co., Inc., 198 S. Main St., Memphis, Tenn., Tel. Memphis 38-1246, manager S. C. Mayne; 1700 Cotton Exchange Bldg., Dallas, Tex., Tel. Prosp. 2654.

UNIVERSAL WINDING CO., P. O. Box 1605, Providence, R. I. Sou. Offices, 819 Johnston Bldg., Charlotte, N. C.; Agts.: R. M. Mauldin and D. M. Dunlap; 903 Whitehead Bldg., Atlanta, Ga., Agt. J. W. Stribling.

USTER CORP., Main Office, Charlotte, N. C.; 80 Boylston St., Boston 16, Mass.

VALENTINE CO., J. W., 612 S. Main St., Winston-Salem, N. C.; Box 278 Salem Station, Winston-Salem, N. C. T. Holt Haywood, Wachovia Bank & Trust Co. Bldg., Winston-Salem, N. C.

VEEDER-ROOT, INC., Hartford, Conn. Sou. Office, Room 231 W. Washington St., Greenville, S. C., Frank J. Swords, Sou. Dist. Mgr.

VICTOR RING TRAVELER CO., Providence, R. I., with Sou. Office and Sales Room at 358-364 W. Main Ave., P. O. Box 842, Gastonia, N. C. Phone 247. Also W. L. Hudson, Box 1313, Columbus, Ga.

WARWICK CHEMICAL CO., DIV. SUN CHEMICAL CORP. Main Office: 1010 44th Ave., Long Island City, N. Y. Sou. Plant: 907 White St., Rock Hill, S. C., J. D. Snipes, Mgr. Sou. Reprs.: M. M. McCann, Box 825, Burlington, N. C.; H. Papini, E. R. Adair, Box 1207, Greenville, S. C.; W. E. Searcy, 425 Tilney Ave., Griffin, Ga.

WATSON & DESMOND, 301½ W. Fourth St., Charlotte 1, N. C. Repr.: John Wyatt, Jefferson Standard Bldg., Greensboro, N. C.; R. V. McPhail, 709 S. Jackson St., Gastonia, N. C.; A. J. Bahan, Woodside Bldg., Greenville, S. C., Edgar E. Ball, (Chemical Dept.) Charlotte, N. C.

WATSON & HART, 1001 E. Bessemer Ave., Goldsboro, N. C.

WATSON-WILLIAMS MFG. CO., Millbury, Mass. Sou. Reprs.: John Wyatt, 703 Jefferson Bldg., Greensboro, N. C.; Arthur J. Bahan, 810 Woodside Bldg., Greenville, S. C.

WEST POINT FOUNDRY & MACHINE CO., West Point, Ga.

WESTPORT FIBRE CORP., Westport, Mass., Va. and N. C. Repr.: Oliver D. Landis, Inc., 718 Queens Rd., Charlotte 7, N. C.; Ga., Ala. and Tenn. Repr.: J. W. Davis, 122 Dillingham St., Columbus, Ga.; S. C. Repr.: Ralph Gossett, 15 Augusta St., Greenville, S. C.

WHITEHEAD ENGINEERING CO., Atlanta, Ga.

WHITIN MACHINE WORKS, Whitinsville, Mass. Sou. Office, Whitin Machine Works Office and Plant, Dowd Road, Charlotte, N. C., R. I. Dalton, V.-Pres. and Sou. Agt.; Charlotte Repair Shop, Z. C. Childers, Sales Mgr.; Atlanta, Ga., Office, 1015 Healey Bldg., B. B. Peacock, Sou. Agt.; Spartanburg, S. C., 724 Montgomery Bldg., R. W. Dunn, Sou. Agt.

WHITINSVILLE SPINNING RING CO., Whitinsville, Mass. Sou. Repr.: William K. Shirley, 11 Wyuka St., Greenville, S. C.

WILKIN & MATTHEWS, 831 N. Tryon St., Charlotte, 3, N. C. Hugh Wilkin and John Matthews.

WILSON CO., EMIL V., Greenville, S. C.

WOLF, JACQUES & CO., Passaic, N. J. Sou. Reprs.: C. R. Bruning, 302 N. Ridgeway Dr., Greensboro, N. C.; G. W. Searell, Rt. 15, Knoxville, Tenn.

Before Closing Down

—TEXTILE INDUSTRY HAPPENINGS AS THE MONTH ENDED—

PERSONAL NEWS

B. M. Jones *(left, above)* has been named general sales manager at Rodney Hunt Machine Co., Orange, Mass., and will direct sales activities of the firm's five product divisions. Prior to his recent promotion, Mr. Jones was sales manager of the textile machinery division. . . . H. F. Creegan *(right)*, formerly assistant to Mr. Jones, has been named to succeed him as sales manager of the textile machinery division.

Melvin Rainville has been appointed overseer of finishing at Peerless Woolen Mills, Inc., Rossville, Ga.

John J. Murphy recently was named overseer of dyeing, warping and beaming at Texas Textile Mills, McKinney, Tex.

LeRoy Hunter and LeRoy Reynolds have been promoted from loom fixers to weave room shift overseers at Clarkesville (Ga.) Mills.

A scholarship honoring William H. Ruffin of Erwin Mills, Inc., Durham, N. C., recently retired president of the National Association of Manufacturers, will be awarded this year by the N.A.M. Known as the N.A.M. President's Scholarship Award, the scholarship will be worth $1,200 to a sophomore student preparing to be a teacher.

E. J. Gernt, since 1944 superintendent of the Luray, Va., division of Schwarzenbach Huber Co., has been promoted to general manager of the company's mills in Virginia.

Israel Rogosin, president of Beaunit Mills and American Bemberg and North American Rayon Corp., recently contributed $100,000 toward construction of a non-sectarian medical college at Yeshiva University, Bronx, N. Y.

Joe L. Smith of Charlotte, N. C., has been elected vice-president of Southern Webbing Mills, Inc., Greensboro, N. C.

Thomas N. Ingram, formerly senior consultant with the management consulting firm of Bruce Payne and Associates, has been added to the Charlotte, N. C., staff of the American Cotton Manufacturers Institute. Mr. Ingram is a native of Bristol, Tenn. He was graduated from Virginia Polytechnic Institute with a degree in business administration and had held executive positions in the textile industry prior to his position with the management consulting firm. The institute's president, Charles C. Hertwig, Macon, Ga., indicated that Mr. Ingram's experience with management problems would make him a valuable addition to the organization's staff. He will assist in working with member mills regarding all activities in which the organization engages, and will assist in the general operation of the Charlotte office, which is under the supervision of F. S. Love, secretary-treasurer. Robert C. Jackson, executive vice-president, heads the institute staff from his office in Washington, D. C.

S. A. Summey *(left)* will be retired Aug. 31 as superintendent of the Alexander Mills division of North Carolina Finishing Co. at Forest City, N. C., ending an active career of 58 years in the textile industry. Mr. Summey began his career as a sweeper with the old Henrietta Mills in 1894. He was overseer of spinning at Henrietta in 1918 when he resigned to become superintendent at Alexander Mills, which was just being completed. . . . M. G. Allen, Jr., will succeed Mr. Summey as superintendent at Alexander.

Joseph F. Merton has rejoined Textron, Inc., as director of quality control for the gray goods division. Mr. Merton has had extensive experience in the textile field and until recently was associated with Deering, Milliken & Co., Inc., as director of quality control. Previously, he has been associated with Burlington Mills Corp., Verney Corp. and Greenwood (S. C.) Mills. . . . Leslie L. Cobb has resigned from Tennessee Eastman Co. to join Textron Southern as technical assistant to Vice-President R. L. Rogers. Mr. Cobb, who is a member of the Greenville (S. C.) Textile Club and the Southern Textile Association, will make his headquarters at Anderson, S. C. . . . Laurence C. Plowman, industrial development consultant of Portland, Me., has joined Textron, Inc., as vice-president in charge of the industrial building department. He will make his headquarters in Providence, R. I.

Gerald W. Porter has resigned as manager of the Forsyth division plant of the Duplan Corp. at Winston-Salem, N. C. Mr. Porter managed the Forsyth plant since it started operations five years ago and previous to that had been manager of several Duplan mills in Pennsylvania over a period of 13 years. Mr. Porter did not announce his future plans.

Malcolm D. Shaffner *(left, above)* has been made executive vice-president of Saco-Lowell Shops. Mr. Shaffner formerly was vice-president, treasurer and secretary of the company and has been with the textile machinery manufacturing concern since 1933. Mr. Schaffner, who will remain as treasurer, was elected a director in 1950. He is also president of the company's wholly-owned subsidiary, the Pawtucket Spinning Ring Co. . . . The appointment of Robert M. Jones *(right, above)* as vice-president in charge of research and development and F. Gorham Brigham, Jr., *(lower left)* as secretary were also announced. Mr. Jones joined the company in 1919 and prior to his promotion was chief engineer. Mr. Brigham was formerly assistant treasurer and assistant secretary. Mr. Brigham, who has been associated with Saco-Lowell since 1945, will retain his position as assistant treasurer.

Fuller E. Callaway, Jr., of LaGrange, Ga., former president of Callaway Mills Co., LaGrange, has been elected to the board of directors of Heppenstall Co., Pittsburgh, Pa., forgings manufacturer.

Claude W. Joiner has been promoted to fill the newly-created post of vice-president in charge of cotton at Standard-Coosa-Thatcher Co., Chattanooga, Tenn. Mr. Joiner, who has been with S-C-T since 1921, formerly held the title of manager of the cotton division. . . . W. O. Cooper has been promoted from personnel supervisor at the Thatcher Plant to overseer of ply winding, reeling and warping. Fowler Jackson, formerly cost and production clerk, has been named to succeed Mr. Cooper as personnel supervisor at Thatcher. Mr. Cooper has been with S-C-T since 1936 and Mr. Jackson since 1947.

Herman P. Baumann has been appointed technical director of the Metropolitan Application Laboratories of American Aniline Products, Inc., at Hawthorne, N. J. Mr. Baumann has spent many years in the dyestuff industry including several years of education and training in Europe. His most recent connections were as chief chemist for Allied Textile Printers and the United Piece Dye Works.

Charles E. Daniel, president of Daniel Construction Co., Greenville, S. C., and Henry C. Taylor, president of Taylor Pinkham & Co., have been elected to the board of directors of J. P. Stevens & Co., Inc.

Dr. Lyman E. Fourt has been appointed manager of physics research at Harris Research Laboratories, Washington, D. C. Dr. Fourt has been with the laboratories since their inception in 1945 and previous to that he was associated with Dr. Harris at the research fellowship of the Textile Foundation at the National Bureau of Standards.

M. D. Holmes, formerly superintendent of Quitman (Ga.) Mills, Inc., a subsidiary of Alexander Smith & Sons Carpet Co., has been promoted and transferred to the company's plant at Brockton, Mass. . . . Recent promotions announced at Quitman Mills follow: Clyde A. Bullard to succeed Mr. Holmes as superintendent; Richard Waters to overseer of day spinning; J. D. Adkins to overseer of night spinning; Arthur Spillars to master mechanic.

Walter Gosnell has been transferred to the Eagle & Phenix Mills division of Reeves Bros., Inc., at Columbus, Ga., where he will act as general superintendent of manufacturing. Mr. Gosnell formerly was superintendent of the Saxon Plant of Reeves Bros. in Spartanburg, S. C. Management of the Eagle & Phenix division recently was combined with that of the company's other Southern plants.

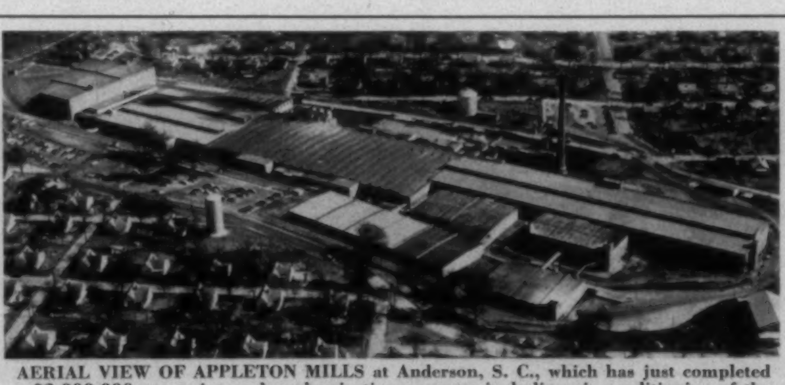
Raymond L. McCauley, formerly associated with H & B American Machine Co., has become sales representative in Virginia and North Carolina for Industrial Plastics, Inc., Whitman, Mass.

Leonard Shapiro has been named to serve as manager of the newly-established textile division of American Polymer Corp., Peabody, Mass. After receiving his B.S. and M.S. degrees from the Massachusetts Institute of Technology, Mr. Shapiro became research assistant to Prof. E. R. Schwartz at M.I.T. He was then research director successively for Interlaken Mills, Warwick Chemical Co., Alrose Chemical Co., and Synthron, Inc. He has published many papers on textile finishing, resins, textile calculations, etc., and is the author of the finishing section of the new *American Synthetic Textile Handbook* which is now in process of publication.

Lewis W. Thomason, Jr., has been appointed Southern district manager for New York & New Jersey Lubricant Co., manufacturer of Non-Fluid Oil. Mr. Thomason succeeds the late Falls L. Thomason, who had succeeded their father, L. W. Thomason, Sr. Before joining New York & New Jersey Lubricant Co. Mr. Thomason had been associated with Cannon Mills, Kannapolis, N. C., for over 17 years, his most recent position being superintendent of synthetics. He will make his headquarters in Charlotte, N. C.

James C. Platt has been retired from his post as executive vice-president of Chicopee Mfg. Corp. of Georgia, Gainesville, Ga. A graduate of Georgia Tech, Mr. Platt was associated with Juilliard Mills of Aragon, Ga., before joining Chicopee 16 years ago. He will continue to make his home in Gainesville.

William M. Fraser, vice-president and general manager, and Fred O'Dell, in charge of sales in the home office of H & B Ameri-



AERIAL VIEW OF APPLETON MILLS at Anderson, S. C., which has just completed a $2,000,000 expansion and modernization program including air conditioning of the entire plant. Appleton is one of the old established cotton producers in the South. General contractor was Daniel Construction Co. of Greenville, S. C.

BEFORE CLOSING DOWN—

can Machine Co., Pawtucket, R. I., will join Whitin Machine Works about April 1.

OBITUARIES

Frederick R. Brown, 69, who retired in 1947 as director of sales of viscose process rayon yarn for E. I. du Pont de Nemours & Co., Inc., a post he had held 19 years, died recently. A son and two daughters survive.

Robert E. Hightower, 61, president and treasurer of Thomaston (Ga.) Mills, died March 12 of a heart attack. Mr. Hightower was the son of the late R. E. Hightower, Sr., one of the founders and first president of Thomaston Mills, Inc. He succeeded his older brother, the late W. Harrison Hightower, as president upon the latter's death in 1947. Surviving are his wife, two daughters, and a brother, Julian T. Hightower, executive vice-president of Thomaston Mills.

Frederick W. Pickard, 80, a director and former vice-president of E. I. du Pont de Nemours & Co., Inc., died March 7 at a hospital in Wilmington, Del. He made his home in Greenville, Del., where interment was made. His wife and a son survive.

MILL NEWS

CHARLOTTE, N. C.—C. M. Guest & Sons of Greensboro, N. C., will begin construction about May 1 on the large building to be erected here for Celanese Corp. of America. The building will be leased to Celanese and will serve as headquarters for important phases of its business.

BESSEMER CITY, N. C. — A new yarn manufacturing concern, Pyramid Mills, began operations here recently. The firm employs 14 persons in the production of embroidery and knitting yarns.

LANETT, ALA.—Construction will begin shortly on two buildings, additions to the Lanett Bleachery & Dye Works plant, the total cost to approximate $350,000, John A. Simmons, president, has made known. "This building program, authorized last January by our board of directors, is not in the nature of an expansion," Mr. Simmons said, "but is for the purpose of streamlining our present operations." One building, three-stories in height, will be erected on the north side of the general office building, and the other two and one-stories, on the south side, thus providing an additional 35,000 square feet of floor space, and bringing the total for the plant to approximately 635,000 square feet.

VALDOSTA, GA.—Strickland Cotton Mills has completed installation of 37 new Model X-2 Draper looms. Two additional rebuilt Model E looms also have been added, making a total of 564 looms and 21,484 spindles.

STONY POINT, N. C.—The two-story cotton warehouse being constructed for Worth Spinning Co. is nearing completion. The 53 by 80 foot brick structure cost about $33,000, exclusive of equipment.

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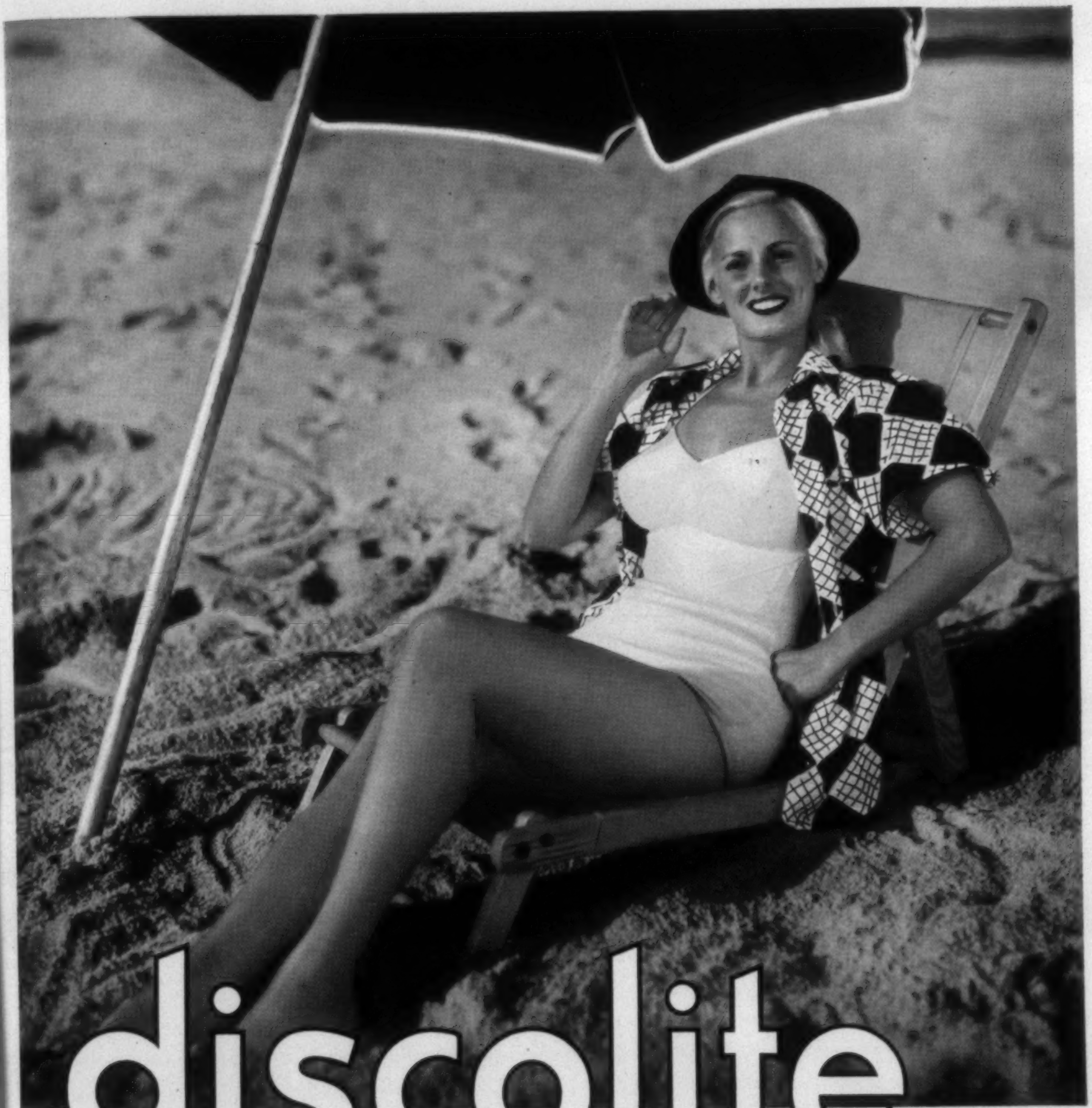

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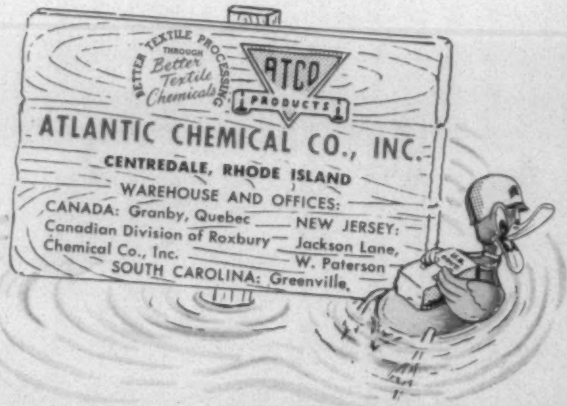
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